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Final
Supplemental Environmental
Impact Statement

Old Agency Road Area (Project 3P13)

Natchez Trace Parkway

Mississippi/Alabama/Tennessee

2002-002686 nH
COMPLETED

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historic places, and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people. The department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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Final Supplemental Environmental Impact Statement
Old Agency Road Area (Project 3P13)
NATCHEZ TRACE PARKWAY
Madison County, Mississippi

February 2001

The Natchez Trace Parkway was established in 1938 to commemorate the Old Natchez Trace, a primitive network of trails stretching from Natchez, Mississippi, to Nashville, Tennessee. When finished, the parkway will extend diagonally approximately 716 kilometers (444 miles) from Natchez to Nashville. About 32 kilometers (20 miles) of the parkway remain unfinished in Mississippi. This document focuses on completing a 1.8-kilometer (1.1-mile) section of motor road (project 3P13) within the city of Ridgeland, Mississippi. While the alignment of this segment was outlined in the 1978 *Natchez Trace Parkway / Final Environmental Impact Statement,* subsequent controversy concerning the parkway design and changes to existing roadways prompted the National Park Service to reevaluate the alternatives. Six alternatives to complete this section are analyzed in this document, including a revised proposed action. The alignment of the parkway would be similar under each alternative; however, each alternative considers different options for Old Agency Road (Old Natchez Trace), for future east-west local traffic, and for access to adjacent residential neighborhoods. Under all alternatives except alternative 4, a portion of Old Agency Road would be closed to vehicular traffic and restored to historical Old Trace appearances. Under all alternatives except alternative 1 (the 1978 design), access to the Choctaw Agency site for interpretation would be provided from the parkway motor road. No alternative would require the acquisition of additional right-of-way.

The revised proposed action was developed after public review of the *Draft Supplemental Environmental Impact Statement* in order to improve east-west and north-south access, circulation, and capacity for local traffic; to improve safety for vehicular travel on the segment of Old Agency Road north of the parkway remaining open to vehicular traffic; and to allow for the construction of a shorter bridge over the parkway motor road that would be farther from existing residential development. The parkway motor road would cross the Old Natchez Trace approximately at-grade and closely follow the existing contour through the NPS right-of-way. Old Agency Road would be closed to vehicular traffic from near Whippoorwill Lane to Richardson Road. For east-west access Old Agency Road Relocated would be constructed south of the parkway motor road from near Whippoorwill Lane to Highland Colony Parkway, where a new intersection would be constructed. Also, a new north-south crossover road, which would bridge over the parkway motor road, would be constructed between Old Agency Road and Old Agency Road Relocated. The estimated construction cost is $7.7 million (2000 dollars).

Alternative 1 would involve the construction of the parkway motor road as outlined in the 1978 *Final Environmental Impact Statement.* This alternative is considered as the no-action alternative, in accordance with the National Environmental Policy Act to help decision makers compare the alternatives. The parkway motor road would cross the Old Trace approximately at-grade; Old Agency Road would be closed to vehicular traffic from near Whippoorwill Lane to Richardson Road. Old Agency Road Relocated would extend from just east of Whippoorwill Lane south of the parkway motor road; it would cross under the parkway motor road near Brame Road; and it would tie back into Old Agency Road north of the parkway between Richardson Road and Highland Colony Parkway. The estimated construction cost is $7.4 million (2000 dollars).

Alternative 2 is similar to the revised proposed action. The parkway motor road would cross the Old Trace approximately at-grade; Old Agency Road would be closed to vehicular traffic from near Whippoorwill Lane to Richardson Road. Like the revised proposed action, Old Agency Road Relocated would be constructed south of the parkway motor road from near Whippoorwill Lane to Highland Colony Parkway. The estimated construction cost is $6.3 million (2000 dollars).

Under alternative 3 the parkway motor road would cross the Old Trace approximately at-grade; Old Agency Road would be closed to vehicular traffic from near Whippoorwill Lane to Highland Colony Parkway. Richardson Road would be extended south, passing under the parkway and connecting to Old Agency Road Relocated, which would follow the same alignment as the revised proposed action and alternative 2. The estimated construction cost is $7.4 million (2000 dollars).

Under alternative 4 the parkway motor road would bridge over Old Agency Road, which would remain open to vehicular traffic. Old Agency Road Relocated would follow a slightly different alignment on the west end, compared to the revised proposed action and alternatives 2 and 3. The estimated construction cost is $7.9 million (2000 dollars).

Under alternative 5 (the proposed action in the *Draft Supplemental Environmental Impact Statement*) the parkway motor road would cross the Old Trace approximately at-grade; Old Agency Road would be closed to vehicular traffic from near Whippoorwill Lane to Richardson Road. Old Agency Road Relocated would be constructed from near Whippoorwill Lane to midway between Richardson Road and Brame Road; it would cross over the parkway motor road east of Richardson Road. The estimated construction cost is $7.4 million (2000 dollars).

The *Draft Supplemental Environmental Impact Statement* was on public review for 60 days, from May 12 to July 13, 2000. One public meeting was held, and approximately 240 written comments were received. This *Final Supplemental Environmental Impact Statement* has been revised to reflect substantive public comments, to consider a revised proposed action that would address local access and circulation concerns, and to clarify the impact analysis. It will be distributed for a 30-day no-action period, after which a record of decision will be prepared to document the selected alternative and to set forth any stipulations for implementing the approved construction plan. For further information about this document, contact the superintendent. Comments should be sent to the following address:

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United States Department of the Interior • National Park Service

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SUMMARY

This *Final Supplemental Environmental Impact Statement* presents and analyzes six alternatives for completing a portion of the Natchez Trace Parkway in Ridgeland, Mississippi; this parkway segment crosses Old Agency Road and is known as project 3P13. The document also analyzes the environmental impacts associated with implementing the alternatives.

The Natchez Trace Parkway was established in 1938 to commemorate the Old Natchez Trace, a primitive network of trails that stretched from Natchez, Mississippi, to Nashville, Tennessee. The Natchez Trace Parkway has been designed to follow the alignment of the historic trace as closely as the requirements of modern road construction allow; upon completion, it will extend diagonally from Natchez to Nashville, a distance of approximately 716 kilometers (444 mi.).

Today, two segments of the parkway comprising about 32 kilometers (20 mi.) remain unfinished in Mississippi. One segment is between U.S. Highways 84/98 and the city of Natchez, site of the parkway's planned southern terminus; the other extends from I-20 in Hinds County to I-55 in Madison County. This document focuses on a shorter portion of this segment (project 3P13), a 1.8 kilometer (1.1 mi.) portion within the city of Ridgeland.

The construction of the Natchez Trace Parkway by the National Park Service (NPS) has been underway for more than 60 years. The completion of the unfinished segments would allow for continuous travel on the parkway for recreational drivers without their having to detour through the Jackson, Mississippi, metropolitan area. The parkway's 1987 *General Management Plan* ranks the completion of the parkway motor road as one of its most prominent management objectives.

Land acquisition for section 3P (the section of parkway from Ridgeland to Clinton, Mississippi) was completed in 1967 when the lands acquired by the state of Mississippi for parkway purposes were transferred to the federal government. The resulting parkway alignment and acquired lands cross portions of the Old Natchez Trace, which has been assimilated into contemporary local public roads at three locations. One of these locations affects a short portion of Old Agency Road in Madison County, the focus of this document. Relocating the portion of Old Agency Road that would be affected by parkway construction within the project area has been considered and evaluated by the National Park Service.

REVISED PROPOSED ACTION — OLD AGENCY ROAD RELOCATED / NEW CROSSOVER ROAD BRIDGE OVER PARKWAY MOTOR ROAD

Description

The revised proposed action was developed subsequent to the public review of the *Draft Supplemental Environmental Impact Statement*. Compared to alternative 5 (the proposed action in the draft document), it would improve east-west access as well as north-south circulation patterns for subdivisions on either side of the NPS right-of-way. It would increase safety for eastbound traffic transitioning from Old Agency Road to Old Agency Road Relocated, which would be built to higher standards. Also, it would allow for the construction of a shorter bridge over the parkway motor road; this bridge would be farther from existing residential development.

The proposed section of the parkway motor road would cross the Old Natchez Trace approximately at-grade and closely follow the existing contour through the NPS right-of-way; it would connect to the

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eastern portion of the parkway by means of a bridge over Highland Colony Parkway. Old Agency Road from near Whippoorwill Lane to Richardson Road would be closed to vehicular traffic and restored to historical Old Natchez Trace appearances. To provide east-west access and circulation for local traffic, a new road known as Old Agency Road Relocated would be constructed south of the parkway motor road from near Whippoorwill Lane to Highland Colony Parkway. To enhance north-south access and circulation, a new crossover road would be constructed between Old Agency Road and Old Agency Road Relocated and would bridge over the parkway motor road. Access to the Choctaw Agency site for interpretation would be provided directly from the parkway motor road, and a parking area for visitors would be developed.

Construction elements of this alternative include 1.8 kilometers (1.1 mi.) of parkway motor road, 1.5 kilometers (0.9 mi.) of Old Agency Road Relocated, 190 meters (623 ft.) of new crossover road between Old Agency Road and Old Agency Road Relocated, a bridge over the parkway motor road (approximately 88.4 meters [290 ft.] long and 7.0 meters [23 ft.] high), an intersection at Old Agency Road Relocated and Highland Colony Parkway, an access road from the parkway motor road to the Choctaw Agency site, a connection of Brame Road to Old Agency Road Relocated, and access to the Dinsmor subdivision and Greenwood Plantation. Approximately 1.1 kilometers (0.7 mi.) of existing roads within the NPS right-of-way (Old Agency Road, Brame Road, the entrance to the Dinsmor subdivision, and the Greenwood Plantation driveway) would be removed and revegetated.

Natural and cultural resources would be managed in accordance with the park's *Resource Management Plan.* Forest cover would be retained wherever possible for visual screening and noise buffers. Additional vegetative buffers would be planted along the parkway motor road where necessary to screen views of adjacent development from and to the parkway motor road, as well as to Old Agency Road Relocated.

No occupied structures or other land acquisition would be required for this alternative. Construction costs are estimated at approximately $7.7 million (2000 dollars).

Environmental Consequences

Transportation / Traffic. East-west and north-south through-traffic and some local traffic would be relocated, causing minor adverse impacts on some travel routes. While some travel patterns would change, access would still be provided in all travel directions for each local road.

Overall traffic volumes are expected to remain the same. Existing traffic would be split between Old Agency Road and Old Agency Road Relocated.

Safety would be moderately improved by constructing new roads and reconfiguring intersections with improved sight distances. Emergency vehicle response times for most residents would remain unchanged, but the improved design of Old Agency Road Relocated and the crossover road, alternate travel routes for emergency vehicles, and decreased traffic on Old Agency Road could all help improve emergency response times to a minor degree.

Cultural Resources. Restoring a 0.7 kilometer (0.4 mi.) portion of the historic Old Agency Road (Old Natchez Trace) to Old Trace appearances would show how it looked in the late 18th–early 19th centuries and would benefit the interpretation of this historic corridor, a long-term, positive effect. Rerouting vehicular traffic from this segment of Old Agency Road to Old Agency Road Relocated would affect historical patterns of circulation and continuous use. Removing a portion of the

Greenwood Plantation driveway would alter the historical approach to this property; however, the closed portion would be restored to its historical appearance.

The Choctaw Agency site would be avoided by construction disturbance. The National Park Service would undertake appropriate site protection measures to avoid or mitigate potential adverse effects related to public visitation before opening the site to interpretation. A plan to deal with inadvertent archeological discoveries is being developed in cooperation with the affected Indian tribes. The Choctaw Nation and other tribal representatives would be contacted to help develop new parkway interpretive materials that would be accurate and inclusive of Native Americans' viewpoints.

Natural Resources. There would be a negligible impact on air quality in both the short and long term, and no violation of national ambient air quality standards for carbon monoxide.

Soils would be affected by excavation. Mitigation efforts would be undertaken to prevent soil erosion and to address the expansive characteristics of local soils.

Approximately 0.7 hectare (1.7 ac.) of wetlands would be permanently filled. Removing roads (such as portions of Old Agency Road, Brame Road, and the Greenwood Plantation driveway) could provide opportunities to improve two wetland systems. Developing remaining parkway sections to the west would result in an additional wetland loss of 0.6 hectare (1.5 ac.); the cumulative wetland impact would be 1.3 hectares (3.2 ac.).

Soil and debris washed into unnamed streams during construction would cause short-term, negligible impacts. Anticipated traffic volumes on Natchez Trace Parkway and Old Agency Road Relocated would be less than 30,000 vehicles; water quality impacts caused by vehicle-contaminated runoff would be long term but negligible. Stormwater discharged into local streams could result in long-term, minor impacts. The restoration of removed and relocated roads could benefit local hydrologic and drainage patterns.

Developing new roads and a parking area at the Choctaw Agency site would result in the loss of approximately 12.1 hectares (30.0 ac.) of vegetation. Removing roads would allow for the restoration or revegetation of approximately 2.1 hectares (5.1 ac.). The long-term impact would be moderate to major within the project area, with a net loss of 10.0 ha (24.9 ac.). Constructing a multi-use trail within the parkway motor road and other parkway projects to the east and west would cause a permanent cumulative loss of vegetation in the local area. Each vegetation type is common in the Jackson area, so the impact would be negligible in the local/regional context.

Wildlife impacts would be minor. Regional wildlife populations would not be expected to decrease because of the long-term loss of 10.0 hectares (24.9 ac.) of habitat. Ongoing development of adjacent parkway segments and a multi-use trail could cause minor cumulative effects to some wildlife species because of habitat loss and fragmentation. No federally listed species occur within the project area. The potential loss of habitat would have negligible to minor impacts on Mississippi species of special concern. Mitigation techniques would be used to maintain habitat where important.

Socioeconomic Impacts. The construction of Natchez Trace Parkway and Old Agency Road Relocated would both be consistent with Ridgeland's *Year 2020 Comprehensive Plan, The Jackson Urbanized Area's Transportation Plan,* and the *Transportation Plan Update for the City of Ridgeland.* The future use of Old Agency Road through the project area is not identified in either transportation plan. However, the closure of a portion of Old Agency Road would not be consistent with the *Comprehensive Plan* map. Providing access to the Choctaw Agency site from the parkway would complement the *Comprehensive Plan's* cultural and historical goals.

Clearing in densely wooded areas would be a long-term, moderate visual impact; impacts to open fields, which contribute to the character of the area, would be major. Views from the parkway motor road of adjacent development, as well as views of new roads from residential areas, would be short-term, moderate impacts pending the revegetation of disturbed areas. With the revegetation of low embankments and cut slopes, views of the low-profile bridge crossing the parkway motor road would be screened, resulting in a short-term, moderate visual impact. Changes to the visual experience for users of local roads would be long term and major as a result of rerouting traffic from Old Agency Road to Old Agency Road Relocated within the project area. Completing this section of the parkway motor road would improve overall visual continuity for parkway users, a long-term, major benefit.

Completing this section of the Natchez Trace Parkway would improve the continuity of the interstate driving experience for recreational users, a long-term benefit. Providing access to and parking at the Choctaw Agency site would make it easier to offer interpretive and educational programs, thus enhancing the experiences of parkway users and local residents. A multi-use trail would provide local residents, as well as parkway users, additional recreational opportunities.

The privacy and seclusion of local residents would be affected to a moderate degree as a result of clearing mature vegetation and constructing urban standard roadways adjacent to residential subdivisions. The low bridge over the parkway motor road (almost at grade) would minimize additional visual impacts. A multi-use trail could improve the quality of life for local residents. The amount of out-of-direction travel for access to local activities would be a minor impact until local residents adjusted to the travel difference. Access to regional attractions would not be affected.

Noise levels would increase at all sites and residential areas near new roadways. These increases would be negligible to minor in the short term and minor to moderate in the long term. The maximum increase would not exceed state guidelines, and all noise levels would be less than the FHWA noise abatement criteria for residential and park areas.

ALTERNATIVE 1 — NO ACTION (1978 DESIGN): PARKWAY BRIDGE OVER OLD AGENCY ROAD RELOCATED

Description

This alternative would construct the segment of parkway motor road as proposed in the 1978 *Final Environmental Impact Statement*. It constitutes the no-action alternative for this supplemental environmental impact statement. Like the revised proposed action, Old Agency Road from near Whippoorwill Lane to Richardson Road would be closed to vehicular traffic and restored to Old Trace appearances. The parkway motor road would cross the Old Natchez Trace approximately at-grade and closely follow existing contours, bridge over Old Agency Road Relocated, and connect to the eastern portion of the parkway. To facilitate east-west local traffic movements Old Agency Road Relocated would be constructed from Whippoorwill Lane along the southern edge of the parkway right-of-way; it would cross under the parkway near Brame Road and tie back into Old Agency Road between Richardson Road and Highland Colony Parkway. Vehicles traveling on the parkway would enter and exit at I-55, with access to the surrounding area by way of Old Agency Road. There would be no access to the Choctaw Agency site under this alternative due to the proximity of the proposed parkway bridge and Old Agency Road Relocated.

Construction elements of this alternative include 1.8 kilometers (1.1 mi.) of parkway motor road, 1.5 kilometers (0.9 mi.) of Old Agency Road Relocated, a parkway bridge over Old Agency Road Relocated (approximately 90 meters [295 ft.] long and 6.4 meters [21 ft.] high), an extension of

Brame Road, and access to the Dinsmor subdivision and Greenwood Plantation by way of Old Agency Road Relocated. To accommodate variations in traffic movements from a wider Old Agency Road Relocated to a narrower Old Agency Road, roadway improvements by the city of Ridgeland to Old Agency Road east to Highland Colony Parkway would be considered in consultation with the National Park Service and the Mississippi Department of Archives and History (the state historic preservation office). Approximately 1.1 kilometers (0.7 mi.) of existing roads (Old Agency Road, Brame Road, the entrance to the Dinsmor subdivision, and the Greenwood Plantation driveway) would be removed and revegetated within the NPS right-of-way.

Like the revised proposed action, natural and cultural resources would be managed in accordance with the park's *Resource Management Plan.* Forest cover would be retained wherever possible for visual screening and noise buffers. Additional vegetative buffers would be planted along the parkway motor road to screen views of Old Agency Road Relocated and adjacent developed areas.

No occupied structures or other land acquisition would be required for this alternative. Construction costs are estimated at approximately $7.4 million (2000 dollars).

Environmental Consequences

Transportation/Traffic. Under this alternative overall travel patterns would remain about the same as now. While there would be slight changes in road alignments, access would still be provided in all travel directions for each local road.

Volume impacts would be minimal since existing roads would be realigned and volumes would be shifted.

As described for the revised proposed action, safety would be moderately improved by constructing new roads and reconfiguring intersections to improve sight distances. Emergency vehicle response times would remain basically the same as at present.

Cultural Resources. The impacts of restoring a 0.7 kilometer (0.4 mi.) portion of Old Agency Road (Old Natchez Trace) to Old Trace appearances, rerouting vehicular traffic to Old Agency Road Relocated, and closing and revegetating a portion of the Greenwood Plantation driveway would be similar to those described for the revised proposed action. However, under this alternative the Greenwood Plantation driveway would not be restored to historical appearances.

The Choctaw Agency site would not be affected by construction, and no access would be provided.

Natural Resources. Impacts on air quality, soils, and water quality would be negligible, as described for the revised proposed action.

Approximately 0.6 hectare (1.5 ac.) of wetlands would be permanently filled for road construction. Road removal could provide opportunities to improve two wetland areas. Developing the remaining parkway motor road sections west of the project area, as described for the revised proposed action, would result in an additional loss of 0.6 hectare (1.5 ac.); the cumulative wetland impact would be 1.2 hectares (3.0 ac.).

Road construction would result in the loss of approximately 10.5 hectares (25.8 ac) of vegetation. The revegetation of removed roads would affect approximately 2.2 hectares (5.2 ac.), for a net loss of 8.3 hectares (20.6 ac.) of vegetation. The long-term impact would be moderate to major within the project area. The construction of a multi-use trail within the parkway corridor would cause permanent cumulative loss of vegetation in the local area.

Wildlife impacts in the project area would be minor, as described for the revised proposed action. Potential habitat would be reduced by 8.3 hectares (20.6 ac.).

Socioeconomic Impacts. Like the revised proposed action, constructing the parkway motor road and Old Agency Road Relocated would be consistent with local plans. Closing a portion of Old Agency Road would be inconsistent with Ridgeland's *Year 2020 Comprehensive Plan* map, and not providing access to the Choctaw Agency site from the parkway would be inconsistent with the *Comprehensive Plan's* cultural and historical goals.

Impacts on visual resources would be similar to the revised proposed action. However, under this alternative it would not be possible to screen views of the parkway bridge over Old Agency Road Relocated, a long-term, moderate impact.

Like the revised proposed action, completing this section of the parkway would enhance the interstate driving experience for recreational users. Future construction of a multi-use trail would enhance recreational opportunities.

Impacts on local residents from vegetation clearing, the construction of urban standard roadways, and the proximity of roadways to residential subdivisions would be short-term, moderate impacts. There would be no impact on local accessibility to regional attractions via I-55, with direct connection by way of Old Agency Road. A multi-use recreational trail would potentially improve the quality of life for local residents.

Like the revised proposed action, noise increases would be negligible to minor in the short term and minor to moderate in the long term.

ALTERNATIVE 2 — OLD AGENCY ROAD RELOCATED

Description

Alternative 2 would involve the construction of the parkway motor road with an alignment the same as the revised proposed action and alternative 1. The parkway would cross the Old Natchez Trace approximately at-grade; Old Agency Road between Whippoorwill Lane and Richardson Road would be closed to vehicular traffic and restored to Old Trace appearances. To facilitate east-west local traffic movements, Old Agency Road Relocated would be constructed along the southern edge of the parkway right-of-way from near Whippoorwill Lane to Highland Colony Parkway, with an intersection at Highland Colony Parkway. Vehicles would enter and exit the parkway at I-55. As described for the revised proposed action, access to the Choctaw Agency site would be provided directly from the parkway motor road, and a visitor parking area would be provided. Access from developments on the north side of the parkway would continue to use Richardson Road and Old Agency Road eastbound to Highland Colony Parkway and I-55.

Construction elements of this alternative include 1.8 kilometers (1.1 mi.) of new parkway motor road, 1.5 kilometers (0.9 mi.) of Old Agency Road Relocated, an access road to the Choctaw Agency site, and access to Brame Road, Dinsmor subdivision, and Greenwood Plantation from Old Agency Road Relocated. Approximately 1.0 kilometer (0.6 mi.) of existing roads (Old Agency Road, Brame Road, and access to the Dinsmor subdivision and Greenwood Plantation) would be removed and revegetated or restored within the NPS right-of-way.

Natural and cultural resources would be managed as described in the revised proposed action and alternative 1. The road prism and fill slopes at Old Agency Road Relocated would be designed and constructed to blend into the existing forest cover as much as possible. Known cultural resource locations would be avoided.

No occupied structures or other land acquisition would be required. Construction costs are estimated at approximately $6.3 million (2000 dollars).

Environmental Consequences

Transportation/Traffic. Impacts would be major. Access for the westbound through-traffic and some local traffic would be relocated, causing adverse impacts on many travel routes. While some travel patterns would change, access would still be provided in all travel directions for each local road; however, north-south travel between subdivisions would be hampered because there would be no crossover between Old Agency Road and Old Agency Road Relocated.

Volume impacts would be moderate, as existing traffic would be split between Old Agency Road and Old Agency Road Relocated. Overall volumes would remain the same.

Safety impacts would be moderate. While remaining portions of Old Agency Road would not be improved, Old Agency Road Relocated would be constructed with improved sight distance, grading, and shoulder width. Minor, adverse impacts could occur to emergency vehicle response times because of increased travel time to properties south of the parkway; this could be offset by new roads meeting safety standards and allowing faster emergency access.

Cultural Resources. The impacts of restoring a 0.7 kilometer (0.4 mi.) portion of Old Agency Road (Old Natchez Trace) to Old Trace appearances, rerouting vehicular traffic to Old Agency Road Relocated, and closing and revegetating a portion of the Greenwood Plantation driveway would be similar to those described for the revised proposed action and alternative 1.

Constructing an access drive and visitor parking area at the Choctaw Agency site would have the same impacts as described for the revised proposed action. The National Park Service would undertake appropriate site protection measures to avoid or mitigate potential adverse effects as a result of providing access.

Natural Resources. Impacts on air quality, soils, and water quality would be negligible (the same as the revised proposed action and alternative 1).

Approximately 0.7 hectare (1.7 ac.) of wetlands would be permanently filled. Road removal could provide opportunities to improve two wetland areas. Cumulative impacts related to parkway motor road construction to the west would be the same as the revised proposed action and alternative 1; the cumulative wetland impact would total 1.3 hectares (3.2 ac.), the same as the revised proposed action.

Impacts to vegetation would be similar to the revised proposed action and alternative 1; approximately 11.5 hectares (28.4 ac.) of vegetation would be lost during construction. Road removal and revegetation would allow approximately 2 hectares (4.9 ac.) to be restored, for a net loss of 9.5 hectares (23.6 ac.).

Impacts on wildlife would be similar to the revised proposed action and alternative 1, except potential habitat would be reduced by 9.5 hectares (23.6 ac.), a minor impact.

Socioeconomic Impacts. Like the revised proposed action, this alternative would be consistent with local plans. Closing a portion of Old Agency Road would not be consistent with Ridgeland's *Year 2020* map. Providing access to the Choctaw Agency site from the parkway would complement the *Comprehensive Plan's* cultural and historical goals.

Impacts on visual resources would be similar to the revised proposed action and alternative 1,

As in the revised proposed action and alternative 1, constructing this section of parkway would improve the recreational driving experience for interstate travel. Providing access and parking directly from the parkway motor road to the Choctaw Agency site would enhance interpretive and recreational opportunities for visitors (the same as the revised proposed action).

Like the revised proposed action, restoring a portion of Old Agency Road to Old Trace appearances would reduce intrusions and increase privacy for residents along the northern boundary of the parkway corridor. Long-term, moderate adverse impacts on local access to regional attractions would occur due to the break in access to I-55 from Old Agency Road Relocated, requiring the use of Highland Colony Parkway. Short-term, moderate impacts would include vegetation clearance, the intrusion of urban standard roadways, and the proximity of roadways to residential subdivisions. Increased out-of-direction travel for both local access across the parkway corridor and to regional attractions would be a short-term, minor impact.

Noise increases would be negligible to minor in the short term and minor to moderate in the long term, similar to the revised proposed action and alternative 1.

ALTERNATIVE 3 — OLD AGENCY ROAD RELOCATED / PARKWAY BRIDGE OVER RICHARDSON ROAD EXTENSION

Description

Alternative 3 would involve the construction of the parkway motor road similar to the previous alternatives in terms of alignment, with the parkway crossing the Old Natchez Trace approximately at-grade. Under this alternative, however, Old Agency Road between Whippoorwill Lane and Highland Colony Parkway would be closed to vehicular traffic and restored to Old Trace appearances, and Richardson Road would be extended south under the parkway to connect with Old Agency Road Relocated. Old Agency Road Relocated would be constructed along the southern edge of the parkway right-of-way from Whippoorwill Lane to Highland Colony Parkway to facilitate east-west local traffic movements. Vehicles would enter and exit the parkway at I-55. Like the revised proposed action and alternative 2, access to the Choctaw Agency site would be provided directly from the parkway motor road, and a visitor parking area would be provided.

Construction elements of this alternative include 1.8 kilometers (1.1 mi.) of parkway motor road, 1.5 kilometers (0.9 mi.) of Old Agency Road Relocated, an extension of Richardson Road south to Old Agency Road Relocated, a parkway bridge over Richardson Road (approximately 68.6 meters [225 ft.] long and 6.0 meters [20 ft.] high), a new access road to the Choctaw Agency site, and access to Brame Road, the Dinsmor subdivision, and the Greenwood Plantation from Old Agency Road Relocated. Approximately 1.75 kilometers (1.1 mi.) of existing roads (Old Agency Road, Brame Road, and access to the Dinsmor subdivision and Greenwood Plantation) would be removed and revegetated or restored within the NPS right-of-way.

Natural and cultural resources would be managed as described for the previous alternatives. For the bridge over Richardson Road extended, the road prism, and fill slopes would be designed and constructed to blend into the existing forest cover and natural terrain as much as possible. This treatment would also be provided at Old Agency Road Relocated, as well as along the parkway motor road. Known cultural resource locations would be avoided.

No occupied structures or other land acquisitions would affect construction costs. Construction costs are estimated at approximately $7.4 million (2000 dollars).

Environmental Consequences

Transportation/Traffic. Impacts to access under alternative 3 would be major and adverse. Both travel patterns and access locations would change, a short-term inconvenience for drivers as they adjusted their travel patterns. Over the long term travel time would be increased due to removing Old Agency Road and constructing Old Agency Road Relocated.

Volume impacts would be major, as all traffic would be shifted from Old Agency Road to Old Agency Road Relocated.

Safety would be improved to a major degree by removing and restoring Old Agency Road, and by rerouting all traffic to Old Agency Road Relocated. Emergency vehicle response times would increase measurably, particularly to properties north of the parkway.

Cultural Resources. Impacts of restoring a portion of Old Agency Road to Old Trace appearances, rerouting vehicular traffic to Old Agency Road Relocated, and closing and revegetating a portion of the Greenwood Plantation driveway would be similar to those described for the revised proposed action and alternatives 1 and 2. However, under this alternative a 1.4 kilometer (0.9 mi.) portion of Old Agency Road would be restored to Old Trace appearances, the longest portion of any alternative.

At the Choctaw Agency site the park would undertake appropriate site protection measures to avoid or mitigate potential adverse effects as a result of providing access (the same as the revised proposed action and alternative 2).

Natural Resources. Impacts on air quality, soils, and water quality would be negligible (the same as the revised proposed action and alternatives 1 and 2).

Approximately 0.7 hectare (1.7 ac.) of wetlands would be permanently filled. Road removal could provide opportunities to improve two wetlands. Impacts related to parkway motor road construction to the west would result in a cumulative wetland impact to 1.3 hectares (3.2 ac.), the same as the revised proposed action and alternative 2.

Impacts on vegetation would be similar to the revised proposed action and alternatives 1 and 2 except approximately 12.1 hectares (30.0 ac.) would be removed during construction. Removing roads, including all of Old Agency Road within the project area, would allow for approximately 3.6 hectares (8.7 ac.) to be revegetated or restored, resulting in a net loss of 8.5 hectares (21.3 ac.).

Impacts on wildlife would be similar to the revised proposed action and alternatives 1 and 2; potential habitat would be reduced by 8.5 hectares (21.3 ac.), a minor impact.

Socioeconomic Impacts. Like the other alternatives, this alternative would be consistent with local plans, although closing a portion of Old Agency Road would not be consistent with Ridgeland's *Year 2020 Comprehensive Plan* map.

Impacts on visual resources would be similar to the revised proposed action and alternatives 1 and 2. Under this alternative extending Richardson Road and constructing a parkway bridge would create a short-term, moderate impact pending the revegetation of disturbed areas.

Impacts on local residents would be short term and moderate, similar to the revised proposed action and alternatives 1 and 2, except under alternative 3 closing and restoring all of Old Agency Road to Old Trace appearances would increase privacy for residents along the northern parkway boundary, a long-term, major benefit. With the Richardson Road extension there would be no out-of-direction travel for access to attractions across the parkway corridor. As described for alternative 2, no direct access to I-55 from Old Agency Road Relocated would have a long-term, moderate impact on regional accessibility.

There would be negligible to minor increases in short-term noise levels, and minor to moderate increases in long-term noise, similar to the revised proposed action and alternatives 1 and 2.

ALTERNATIVE 4 — OLD AGENCY ROAD RELOCATED / PARKWAY BRIDGE OVER OLD AGENCY ROAD

Description

Alternative 4 would involve the construction of the parkway motor road with an alignment identical to the previous alternatives. However, under this alternative the parkway would bridge over Old Agency Road, which would remain open to vehicular traffic throughout the entire length of the segment. To facilitate east-west local traffic movements, Old Agency Road Relocated would also be constructed along the southern edge of the parkway right-of-way, from an intersection with Old Agency Road approximately 400 meters (1,312 ft.) east of Whippoorwill Lane to Highland Colony Parkway; a new intersection would also be constructed at Highland Colony Parkway. The parkway bridge over Old Agency Road would be long and skewed, requiring more extensive approach fills. Vehicles traveling on the parkway would enter and exit at I-55. Access to the Choctaw Agency site would be provided directly from the parkway motor road, and a parking area would be provided for visitors (the same as the revised proposed action and alternatives 2 and 3).

Construction elements of this alternative include 1.8 kilometers (1.1 mi.) of new parkway motor road, 1.4 kilometers (0.9 mi.) of Old Agency Road Relocated, a parkway bridge over Old Agency Road (approximately 103.7 meters [340 ft.] long and 7.0 meters [23 ft.] high), a new access road to the Choctaw Agency site, and access to Brame Road, the Dinsmor subdivision, and Greenwood Plantation from Old Agency Road Relocated. Approximately 0.3 kilometer (0.2 mi.) of existing roadways within the NPS right-of-way (Brame Road, entrances to the Dinsmor subdivision, and the Greenwood Plantation) would be removed and revegetated.

Natural and cultural resources would be managed as described for the previous alternatives. For the bridge over Old Agency Road, the road prism and fill slopes would be designed and constructed to blend into the existing forest cover and natural terrain as much as possible. This treatment would also be provided at Old Agency Road Relocated, as well as along the parkway motor road. Known cultural resource locations would be avoided.

No occupied structures or other land acquisitions would be required. Construction costs are estimated at approximately $7.9 million (2000 dollars).

Environmental Consequences

Transportation/Traffic. Impacts to access under alternative 4 would be moderate. There would be short-term, adverse impacts as drivers became familiar with new travel patterns. Over the long term access would be provided to all local roads. Changes in travel time, due to rerouting, would be minor.

Volume impacts would be moderate as a portion of traffic on Old Agency Road would shift to Old Agency Road Relocated.

Improvements to safety would be minor since Old Agency Road would remain open. Less than 2,000 vehicles per day would be shifted to Old Agency Road Relocated, which would not be enough to improve safety conditions on Old Agency Road. Emergency vehicle response times would remain basically unchanged, but could improve because of better road design and additional east-west access.

Cultural Resources. Under alternative 4 a grade-separated parkway motor road would continue historical circulation and continuous use on the segment of Old Agency Road (Old Natchez Trace) within the project area. Constructing a parkway overpass would nevertheless visually intrude on the historical setting of the road corridor, resulting in a major adverse effect. Removing a portion of the Greenwood Plantation driveway would have the same impact on this historic property as the other alternatives.

At the Choctaw Agency site the park would undertake appropriate site protection measures to avoid or mitigate potential adverse effects as a result of providing access (the same as the revised proposed action and alternatives 2 and 3).

Natural Resources. Impacts on air quality, soils, and water quality would be negligible, the same as the other alternatives.

Approximately 0.7 hectare (1.7 ac.) of wetlands would be permanently filled. Major, long-term adverse impacts would occur to two wetlands, each of which would be reduced approximately 35% to 40% and the remaining sections fragmented; moderate, long-term impacts would occur to two wetlands because of reduced sizes; negligible adverse impacts would occur to one wetland; and no adverse impacts would occur to five wetlands. Cumulative effects from developing the parkway section to the west would total 1.3 hectares (3.2 ac.), the same as the revised proposed action and alternatives 2 and 3.

Impacts on vegetation would be similar to the other alternatives, with construction resulting in the loss of approximately 11.1 hectares (27.5 ac.). Removing some roads would allow approximately 0.4 hectare (1.0 ac.) to be revegetated, for a net loss of 10.7 hectares (26.5 ac.).

Impacts on wildlife would be similar to the other alternatives, except potential habitat would be reduced by 10.7 hectares (26.5 ac.), a minor impact.

Socioeconomic Impacts. As described for the other alternatives, this alternative would be consistent with Ridgeland's *Year 2020 Comprehensive Plan, The Jackson Urbanized Area's Transportation Plan,* and the *Transportation Plan Update for the City of Ridgeland.* However, keeping Old Agency Road open to vehicular traffic under this alternative would be consistent with the *Comprehensive*

Plan map. Providing access to the Choctaw Agency site from the parkway would complement the *Comprehensive Plan's* cultural and historical goals (the same as the revised proposed action and alternatives 2 and 3).

Impacts on visual resources would be similar to the other alternatives. However, under this alternative a higher and longer parkway bridge (including larger earth fill embankments) over Old Agency Road would create long-term, major impacts. Changes to the visual experience for users of local roads would be long term and moderate because Old Agency Road would remain open to vehicular traffic.

Like the other alternatives, completing this section of the parkway would enhance recreational experiences for parkway users. Like the revised proposed action and alternatives 2 and 3, providing access directly from the parkway motor road to the Choctaw Agency site, as well as parking, would improve interpretive and recreational opportunities.

Impacts on local residents would be greater than the other alternatives due to the bridge over Old Agency Road being longer and higher, resulting in additional vegetative clearance, and the proximity of roadways to residential subdivisions. Like alternatives 2 and 3, there would be long-term, moderate adverse impacts on local access to regional attractions without direct access to I-55 from Old Agency Road Relocated. Many existing access routes to local destinations across the parkway corridor would be retained under alternative 4, requiring minimal out-of-direction travel.

Noise impacts would be similar to the other alternatives, with negligible to minor increases in the short term, and minor to moderate increases in the long term, even though Old Agency Road would remain open from Highland Colony Parkway to near Whippoorwill Lane.

ALTERNATIVE 5 — MODIFIED 1978 DESIGN: OLD AGENCY ROAD RELOCATED / BRIDGE OVER PARKWAY

Description

Alternative 5 (the proposed action in the *Draft Supplemental Environmental Impact Statement*) would involve the construction of the parkway with an alignment similar to the other alternatives. The parkway motor road would cross Old Agency Road (Old Natchez Trace) at-grade, with Old Agency Road closed and restored to Old Trace appearances from near Whippoorwill Lane to Richardson Road. To facilitate east-west local traffic movements, Old Agency Road Relocated would be constructed along the southern edge of the parkway right-of-way between Whippoorwill Lane and midway between Richardson Road and Brame Road. It would angle north at Richardson Road, passing over the parkway motor road to connect with existing Old Agency Road in the vicinity of the St. Andrew's School parking lot. Old Agency Road Relocated would cross over the parkway motor road approximately 150 meters (492 ft.) east of Richardson Road. At this crossing the parkway motor road would be placed in a 3.9 to 4.6 meter (12 to 14 ft.) deep cut section through a rise in topography, allowing the construction of a low-profile bridge over the parkway motor road. Brame Road would be realigned to intersect with Old Agency Road Relocated. Access to the Choctaw Agency site would be provided directly from the parkway motor road, which would include a parking area for visitors (the same as all alternatives except 1).

Construction elements of this alternative include 1.8 kilometers (1.1 mi.) of new parkway motor road, 1.1 kilometers (0.7 mi.) of Old Agency Road Relocated, a low-profile bridge (approximately 90 meters [325 ft.] long and 7.0 meters [23 ft.] high) over the parkway motor road, the realignment of Brame Road, and access to the Dinsmor subdivision and the Greenwood Plantation. Roadway improvements by the city of Ridgeland to Old Agency Road to accommodate variations in traffic movements from an improved Old Agency Road Relocated segment would be considered in consultation with the National Park Service and the Mississippi Department of Archives and History. Approximately 1.1 kilometers (0.7 mi.) of existing roadways would be removed and revegetated or restored within the NPS right-of-way.

Natural and cultural resources would be managed as described in the other alternatives. The Old Agency Road Relocated crossing over the parkway motor road and road prism cut slopes would be designed and constructed to blend with the forest cover as much as possible. Known cultural resource locations would be avoided.

No occupied structures or other land acquisition would be required. Construction costs for this alternative are estimated at approximately $7.4 million (2000 dollars).

Environmental Consequences

Transportation/Traffic. Impacts would be the same as alternative 1. Impacts to access would be minor.

Volume impacts would be minimal since traffic would be shifted to new road alignments.

Safety would be moderately improved by building news roads and reconfiguring intersections to improve sight distances. Minor adverse impacts in emergency vehicle response times could occur for residents along Brame Road and at Greenwood Plantation because of the new access from Old Agency Road Relocated.

Cultural Resources. The impacts of restoring a 0.7 kilometer (0.4 mi.) portion of Old Agency Road (Old Natchez Trace) to Old Trace appearances, rerouting vehicular traffic to Old Agency Road Relocated, and closing and revegetating a portion of the Greenwood Plantation driveway would be similar to those described for the revised proposed action and alternatives 1, 2, and 3.

At the Choctaw Agency site the park would undertake appropriate site protection measures to avoid or mitigate potential adverse effects as a result of providing access (the same as all alternatives except 1).

Natural Resources. Impacts on air quality, soils, and water quality would be negligible, the same as the other alternatives.

Impacts to wetlands would be similar to the other alternatives, with approximately 0.5 hectare (1.4 ac.) of wetlands being permanently filled. Removing portions of roads could provide opportunities to improve wetland systems in two areas. Cumulative impacts associated with developing parkway motor road sections to the west would impact 1.2 hectares (3.0 ac.), similar to alternative 1.

Vegetation impacts would be similar to the other alternatives, except approximately 11.3 hectares (27.8 ac.) of vegetation would be removed during construction. Removing roads would allow approximately 2.2 hectares (5.2 ac.) to be revegetated, for a net loss of 9.1 hectares (22.5 ac.).

Like the other alternatives, wildlife impacts would be minor. Potential habitat would be decreased by 9.1 hectares (22.5 ac.).

Socioeconomic Impacts. This alternative would be consistent with local plans except closing a portion of Old Agency Road would be inconsistent with Ridgeland's *Year 2020 Comprehensive Plan* map (the same as all alternatives except 4).

Impacts on visual resources would be similar to the other alternatives.

Like the other alternatives, completing this section of the parkway motor road would improve the continuity of the recreational driving experience for parkway visitors.

Impacts on local residents would be similar to the other alternatives. Short-term, moderate impacts would include vegetation clearance, the intrusion of urban standard roadways, and the proximity of roadways to residential subdivisions. As described for alternative 1, there would be no impact on local accessibility to regional destinations via I-55.

Noise impacts would be similar to the other alternatives. A lower road-grade where the parkway motor road cut through the existing topography would have minimal effects on traffic-related noise.

PUBLIC REVIEW PROCESS

The *Draft Supplemental Environmental Impact Statement* was on public review for 60 days, from May 12 to July 13, 2000. One public meeting was held and approximately 240 written comments were received, including 1 petition with a total of 637 signatures, 44 comment sheets from attendees at the public review meeting, 25 signed form letters, and 19 letters from individuals, agencies, and organizations. This *Final Supplemental Environmental Impact Statement* has been revised to reflect substantive public comments, including the consideration of a revised proposed action to address local concerns related to access, circulation, safety, and traffic capacity, and to clarify the impact analysis. Responses to substantive comments are included in the "Consultation and Coordination" chapter, along with copies of letters from federal, state, and local agencies and from local organizations. The final document will be distributed for a 30-day no-action period, after which a record of decision will be prepared to document the selected alternative and to set forth any stipulations for implementing the approved construction plan.

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PURPOSE OF AND NEED FOR ACTION

The Natchez Trace Parkway was established in 1938 to commemorate the Old Natchez Trace, a primitive network of trails that stretched from Natchez, Mississippi, to Nashville, Tennessee. The historic Old Natchez Trace, which frequently followed uplands between watersheds where land was drier and stream crossings less frequent, was the principal overland link between the Old Southwest Territory on the lower Mississippi River and the United States during the late 18th and early 19th centuries.

Designed to follow the alignment of the historic trace as closely as the requirements of modern road construction allow, the Natchez Trace Parkway will, upon completion, extend diagonally from Natchez to Nashville, a distance of approximately 716 kilometers (444 mi.).

Today, two segments of the parkway comprising about 32 kilometers (20 mi.) remain unfinished in Mississippi. One segment is between U.S. Highways 84 and 98 and the city of Natchez, site of the parkway's planned southern terminus; this segment accounts for somewhat less than half of the unfinished distance. The other segment extends from I-20 in Hinds County to I-55 in Madison County; this segment accounts for the majority of the unfinished distance. A shorter portion of this segment, a 1.8 kilometer (1.1 mi.) portion known as project 3P13 within the city of Ridgeland, is the focus of this document.

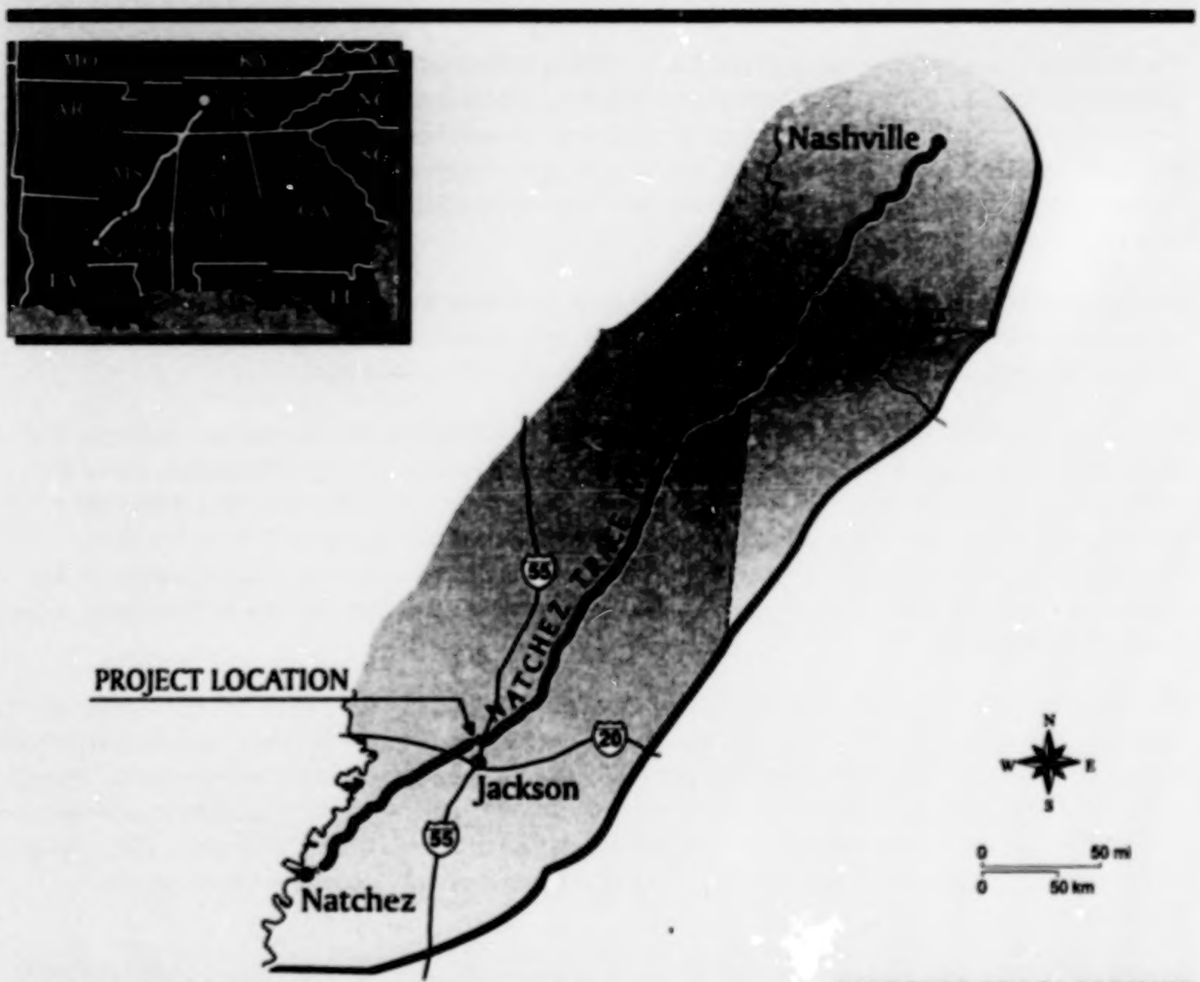
The completion of the parkway motor road by the National Park Service (NPS) has been underway for more than 60 years. The construction of this short segment, combined with other construction projects between I-20 and I-55 (which are in progress or are being planned), would allow recreational driving on the entire parkway without users having to detour through the greater metropolitan area of Jackson, Mississippi (see the Vicinity and the Construction Detour Route maps). The parkway's 1987 *General Management Plan* ranks the completion of the parkway motor road as one of its most prominent management objectives.

The *Draft Supplemental Environmental Impact Statement* was on public review from May 12, 2000, to July 13, 2000. Approximately 240 written comments were received, including 1 petition with a total of 637 signatures, 44 comment sheets from attendees at the public review meeting, 25 signed form letters, and 19 letters from individuals, agencies, and organizations. Substantive comments are addressed in this *Final Supplemental Environmental Impact Statement.* In response to comments from the public review, a revised proposed action is being considered in this document to address concerns relating to access, circulation, safety, and traffic capacity. The final document will be distributed, and after a 30-day no-action period a record of decision will be prepared, which will document the alternative selected for implementation and set forth stipulations for implementing the approved construction plan, thus completing the process required by the National Environmental Policy Act.

DESCRIPTION OF THE NATCHEZ TRACE PARKWAY

National parkways, which are authorized by a special act of Congress, are elongated parks that feature roads designed for pleasure traveling, that provide a motoring experience through a rural or natural setting, and that embrace scenic, recreational, or historic features of national significance. A national parkway has sufficient merit and character to make it a national attraction and not merely a means of travel from one place to another. It has limited access from adjoining properties, and no commercial traffic is allowed.

THE REGION



NATCHEZ TRACE PARKWAY

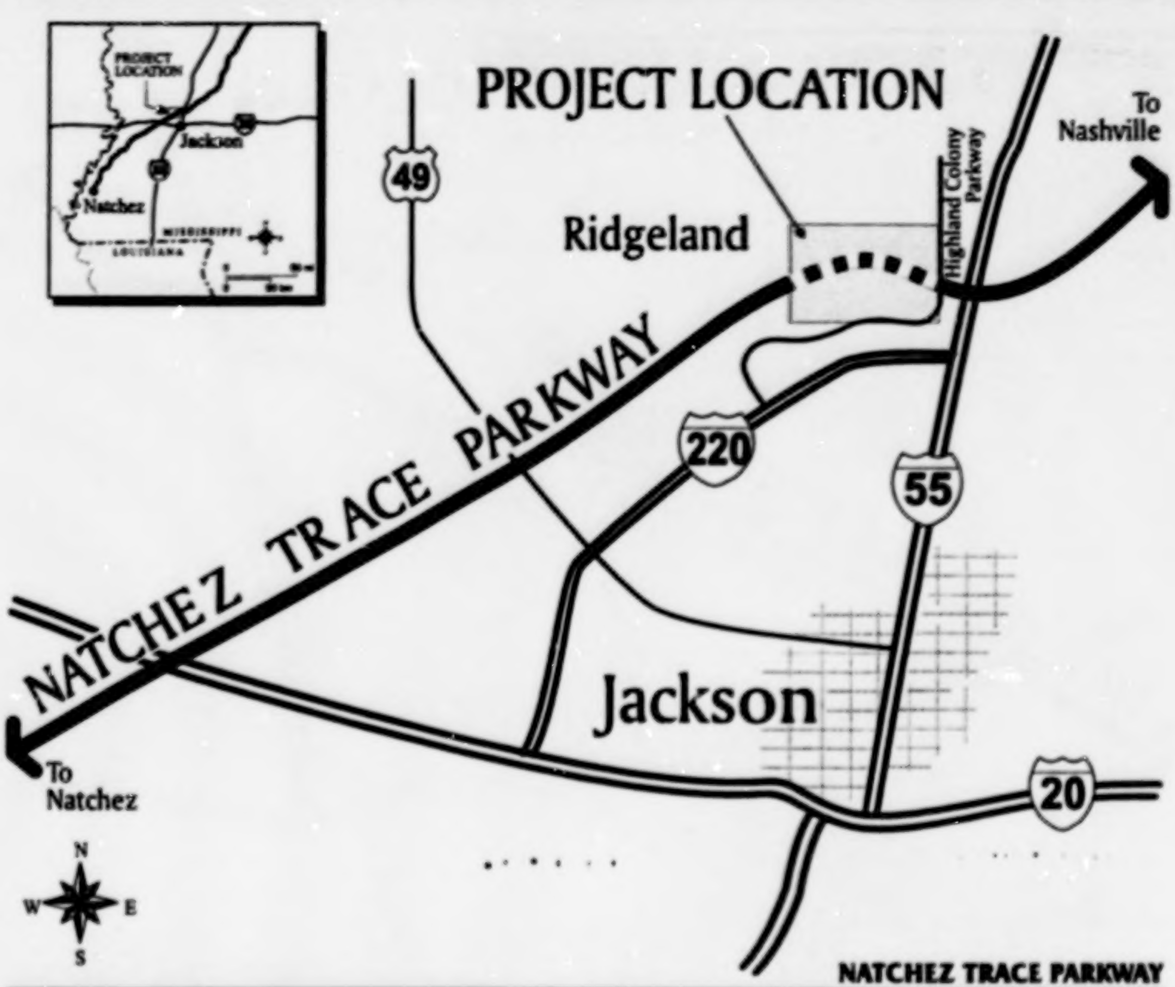
604/20089 - Dec 00

Establishment of the Natchez Trace Parkway

On May 21, 1934, Public Law 73-240 directed the National Park Service to undertake a survey of the historic Old Natchez Trace that would "estimate the cost of construction of an appropriate national parkway over this route" and to collect information "with the objective of determining matters concerning the construction of the Natchez Trace Parkway." Four years later on May 28, 1938, Public Law 75-530 established Natchez Trace Parkway and assigned its administration and maintenance to the National Park Service. The parkway is an elongated park of 51,150 acres covering a distance of 444 miles between Natchez, Mississippi, and Nashville, Tennessee.

The Natchez Trace Parkway, in addition to Skyline Drive through Shenandoah National Park and the Blue Ridge Parkway, was partly a product of the parkway movement of the 1930s, when automobiles were becoming the primary form of transportation in the United States. The construction of these national parkways not only helped relieve unemployment during the Great Depression but also affirmed that American society's dependence on automobiles had resulted in a need for scenic roadways uninterrupted by cross traffic or modern intrusions.

VICINITY



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Primary Parkway Experience

The fact that a national parkway is a distinct type of highway was clearly identified in 1938 when the National Park Service established the following eight design criteria that would be used to distinguish national parkways. National parkways

(1) are designated for noncommercial, recreational use

(2) seek to avoid unsightly buildings and other roadside developments that mar the ordinary highway

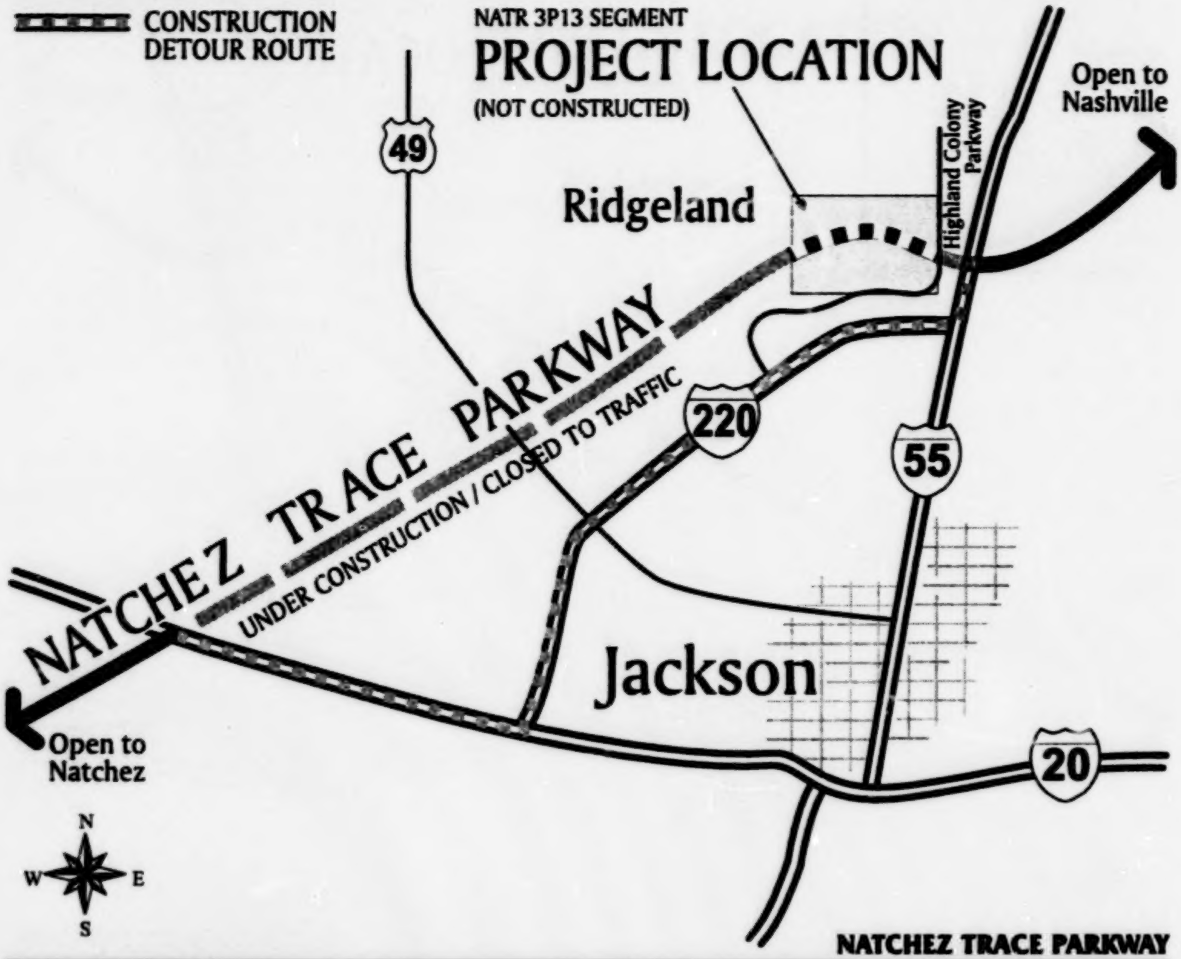
(3) are built with a much wider right-of-way to provide an insulating strip of park land between the parkway motor road and the abutting private property

(4) eliminate frontage and access rights and preserve natural scenic values

(5) preferably take a new alignment, bypassing built-up communities and avoid traffic congestion

(6) seek to make accessible the best scenery in the country they traverse, hence the shortest or most direct route is not necessarily a primary consideration

CONSTRUCTION DETOUR ROUTE, JACKSON, MISSISSIPPI



NATCHEZ TRACE PARKWAY

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(7) eliminate major grade crossings (crossing intersections with the parkway motor road itself)

(8) have entrance and exit points spaced at distant intervals to reduce interruptions to the main traffic flow

In fulfilling the legislative intent of the Natchez Trace Parkway, the National Park Service designed the parkway motor road to provide a moderate speed, narrow road driving experience. The intimate way in which the parkway motor road blends with the natural landscape — the wide right-of-way, minimum width of the pavement, the grass shoulders and woodlands, natural areas, and agrarian fields that line the roadway corridor — contributes to the visual experience of traveling, which is the primary park experience for motorists visiting it.

The parkway right-of-way width averages about 260 meters (825 feet) along its entire length, ranging from 122 meters to 305 meters (400 to 1,000 feet). Wider areas occur at irregular intervals and are commonly associated with recreational and management facilities. Facilities for public use are provided at intervals along the parkway motor road. There are parking pullouts at trailheads, overlooks, and interpretive sites. Visitor facilities include comfort stations, picnic tables, campgrounds, and other facilities. Interpretive exhibits are located at points of scenic, scientific, archeological, and historic interest, including sections of the Old Natchez Trace.

Parkway Construction Segments

For purposes of land acquisition and construction, the parkway motor road was divided into sections, with section 1A at the northern terminus at Nashville, Tennessee, and section 3X at the southern terminus at Natchez, Mississippi. The numbers 1, 2, and 3 of the section names refer to the states of Tennessee, Alabama, and Mississippi, respectively; letters indicate parkway motor road segments within each state in a north to south progression. Today two portions of the parkway motor road comprising about 32 kilometers (20 mi.) of its total length remain unfinished in Mississippi. The sections within which these unfinished portions occur are section 3P (running from I-20 to U.S. Highway 51 in Hinds and Madison Counties) and section 3X (extending from the southern terminus in the city of Natchez to near U.S. Highway 61 in Adams County).

The Natchez Trace Parkway has been under construction since the late 1930s. The first section of the parkway motor road was completed adjacent to Ridgeland, Mississippi, in 1939. Throughout this long development period, the parkway's design guidelines have remained relatively constant, giving the entire route continuity in layout, design, construction, maintenance, and visitor experience. The design criteria grew to include both those applicable to all NPS national parkways and three additional criteria specific to the Natchez Trace Parkway. These additional specific design criteria include (1) a curvilinear road alignment with minimum grades; (2) design of bridges and other developed features to minimize visual contrast against the national parkway landscape; and (3) the grade separation of the parkway motor road from other public roads crossing park lands, with the parkway motor road preferentially crossing over such public roads.

Setting

The national parkway typically traverses rural or natural landscapes, and it is designed to provide parkway visitors a leisurely and scenic motoring experience. To accomplish this, the parkway motor road maintains a wide right-of-way to sustain natural vegetation and landforms. The roadway is designed to rest lightly on the land and to respect the natural topography by minimizing cuts and fills. It has a low speed limit, low traffic volumes, and low development density. The route for the parkway motor road was selected to skirt cities, towns, and high-density developed areas, accessing them by widely separated, unobtrusive interchanges and access roads. There are no stop signs on the parkway motor road, although there are stop signs along its route to control access on and off the parkway motor road. The parkway motor road is not intended to serve commuter traffic, and commercial traffic is prohibited. The parkway motor road also links federal, state, local, and private cultural and historic sites along its length.

Land uses along the route have evolved since 1938 and have shaped in some measure the national parkway visitor experience. Conversely, land acquisition and parkway motor road development have influenced nearby land uses to varying degrees due to the location of national parkway access and egress points, the need to provide services to parkway motor road travelers, and the desire to provide a particular visitor experience. To maintain the recreational experience afforded national parkway visitors consistent with the parkway's purpose, the portion of the parkway motor road proposed for construction in this document must be consistent with NPS and national parkway design requirements.

The Natchez Trace Parkway today preserves the history associated with one of the country's earliest trails and provides scenic, cultural, natural, and recreational opportunities to 13 million visitors annually. The parkway motor road traverses three distinct types of scenic terrain. Along the northern portions the landscape is typified by hilly country with exposed limestone; along the center portion forested areas dotted with agricultural lands predominate; and along the southern portions oak trees draped with Spanish-moss characterize the parkway around Natchez. About two-thirds of the parkway motor road is in Mississippi.

PLANNING HISTORY OF THE OLD AGENCY ROAD SECTION (PROJECT 3P13)

Planning for parkway construction between I-20 and I-55 in Hinds and Madison Counties, Mississippi, has been ongoing since 1937, when an alignment closely following that of the Old Natchez Trace was chosen to guide land acquisition. The general alignment of the Natchez Trace Parkway around Jackson, Mississippi (section 3P), was approved with concurrence of the Hinds and Madison County Road Commissioners on December 16, 1965, with section 3P of the *Public Road System Plan.*

Land acquisition for section 3P was completed in 1967 when Mississippi transferred the lands it had acquired for parkway purposes to the federal government. The resulting parkway alignment and acquired lands cross portions of the Old Natchez Trace, which had been assimilated into contemporary local public roads at three locations. These crossings affect two short portions of Old Agency Road in Madison County (one is included within the project area; the other 2.25-mile section is to the southwest within a portion of the parkway partially constructed in the 1990s), and a longer 0.6-mile segment of Cynthia Road at U.S. Highway 49 in Hinds County.

The relocation of portions of local public roads, specifically the portion of Old Agency Road that would be affected by parkway construction within the project area, has been considered and evaluated by the National Park Service, Madison County, and the city of Ridgeland. Several of the proposed parkway construction designs have been incorporated into the alternatives presented in this document for consideration and review by the public.

A brief chronology of the planning history for section 3P is presented below.

1967 The right-of-way for section 3P of the Natchez Trace Parkway was deeded to the United States by the state of Mississippi. This included Old Agency Road.

According to the *Public Road System Plan,* which was part of the deed conveyance, a section of the existing Old Agency Road was to be closed. A replacement roadway within the parkway boundary (Old Agency Road Relocated) was to be constructed south of the parkway motor road. The closed section of Old Agency Road was to be restored as the Old Natchez Trace.

1974 Portions of the Old Natchez Trace in Mississippi were nominated to the National Register of Historic Places by the National Park Service.

1978 A *Final Environmental Impact Statement* (FEIS), dated March 7, 1978, was issued by the National Park Service to address all remaining construction segments of the Natchez Trace Parkway, including section 3P. At that time for section 3P it was proposed to construct the parkway motor road across Old Agency Road at-grade, returning the severed sections of Old Agency Road to original Old Natchez Trace appearances and constructing new roads to connect the severed city streets.

The Mississippi state historic preservation officer concurred with the *Final Environmental Impact Statement*. The restoration and maintenance of portions of the Old Natchez Trace, including Old Agency Road, were covered in the statement.

1980 A memorandum of agreement between the Advisory Council on Historic Preservation and the National Park Service stipulated that the Park Service was to prepare an Old Natchez Trace multiple resource nomination for the restored segments prior to completing the parkway motor road (see appendix C).

1987 The *General Management Plan* for the Natchez Trace Parkway was approved. The 1978 *Final Environmental Impact Statement* is referenced in that plan, and subsequently a "Record of Decision" was prepared.

1988 The Mississippi Department of Archives and History certified Old Agency Road as a Mississippi landmark (that portion of Old Agency Road located within the boundary of the Natchez Trace Parkway is excluded from the state landmark status).

A conveyance of easements was exercised with the developer of the Dinsmor subdivision, and a subsequent memorandum of agreement was entered into. The memorandum underscores the National Park Service's intention to relocate Old Agency Road and to close the Dinsmor Crossing access to the subdivision from the north. It was signed by the Advisory Council on Historic Preservation, the Mississippi state historic preservation officer, and the Madison County Board of Supervisors, as well as the National Park Service.

Also in 1988 Natchez Trace Parkway staff met with Ridgeland elected officials and staff to discuss preliminary plans for the parkway motor road construction in the Old Agency Road area. They discussed a plan calling for the parkway motor road to cross Old Agency Road at-grade. A half-mile section of Old Agency Road from Whippoorwill Lane east to Richardson Road would be closed and restored as Old Natchez Trace. A new roadway section, Old Agency Road Relocated, would be constructed adjacent to the southern parkway boundary, as the 1967 deed stipulated.

1995 The Old Natchez Trace and the Choctaw Agency site were listed on the National Register of Historic Places.

1998 Natchez Trace Parkway staff initiated the Old Agency Road Area *Draft Supplemental Environmental Impact Statement* to update the 1978 *Final Environmental Impact Statement.*

2000 The *Draft Supplemental Environmental Impact Statement* for the 3P13 project is released for public review.

2001 The *Final Supplemental Environmental Impact Statement* for the 3P13 project is released.

PLANNING ISSUES AND CONCERNS — SCOPING SUMMARY

In response to controversy concerning the design of parkway construction and changes to existing roadways within the project area, the National Park Service announced in the *Federal Register* on August 3, 1998, its intent to prepare a supplemental environmental impact statement. This included the opening of a 60-day public scoping period, during which comments could be provided to the

National Park Service in an effort to help identify the issues and concerns that should be considered in the environmental analysis process.

In conjunction with this scoping period, the National Park Service held a public meeting in Ridgeland, Mississippi, on August 27, 1998. Written comments were also received. These comments were recorded, categorized by issue or opportunity, and evaluated for use in developing preliminary alternatives. The major scoping issues and opportunities, organized by subject topic, are summarized below. For additional information in regard to public involvement activities, refer to the "Consultation and Coordination" chapter of this document.

Accommodate future east-west travel demand in the corridor.

Allow for increased demand from development planned to the west of Ridgeland.

Facilitate access to Highland Colony Parkway and I-55.

Preclude the use of the Natchez Trace Parkway for local and commuter travel (minimize impacts on parkway visitors).

Improve local safety conditions.

Provide adequate roadway design for projected needs and users.

Provide separate pedestrian and bicycle facilities.

Maintain local accessibility.

Minimize nonlocal traffic on local streets.

Minimize out-of-direction travel for local access.

Facilitate access between neighborhoods and local destinations.

Preserve the history and aesthetics of the area.

Maintain opportunities for scenic driving.

Preserve the history of the Old Natchez Trace in the area.

Preserve trees and vegetation in the area.

Protect community values.

Minimize noise impacts and privacy intrusions.

Minimize effects to air quality.

Preserve the rural atmosphere along the parkway.

Protect the quality of existing views from neighborhoods.

Provide opportunities for accommodating the public need for local parks.

Provide a high-quality design for Natchez Trace facilities.

Minimize the taking of trees and vegetation.

Provide extensive landscape buffer planting.

Utilize natural appearing materials.

Locate facilities to minimize impacts and utilize natural features.

Develop a multi-use trail to connect historic sites.

Develop the project consistent with previous planning decisions.

Accommodate the 1994 NPS alignment decision.

Accommodate the 1988 NPS temporary north access agreement (Dinsmor).

Accommodate the 1988 National Park Service / Advisory Council on Historic Preservation et al. memorandum of agreement (new access to Old Agency Road).

Provide Natchez Trace facilities within reasonable costs.

RELATIONSHIP OF THIS PLANNING EFFORT TO OTHER AREA PROJECTS

Natchez Trace Parkway

The construction of realigned accesses between the parkway motor road and I-55 (approximately 1.25 miles northeast of the project area) are underway.

Grading and earthwork of the parkway motor road between I-20 and U.S. 49 (several miles southwest of the project area) are under way.

Asphaltic concrete surface will be placed on the parkway motor road from I-20 to I-55 (includes the parkway through the project area). Six bridges will be constructed on the parkway section between I-20 and U.S. 49, which are now in the planning stage.

The replacement of parkway motor road bridges over Old Canton Road and Rice Road (2.0 miles and 3.25 miles northeast of the project area) are also planned.

Multi-Use Trail

A 33.2-kilometer (21 mi.) paved trail is proposed on national parkway lands by the *Natchez Trace Parkway Comprehensive Trail Plan.* In the greater Jackson, Mississippi, metropolitan area, the trail would be a continuous segment between I-20 and I-55. The initial 2.9 km (1.8 mi.) segment between U.S. 51 and Old Canton Road is currently under construction (1.25 miles northeast of the project area), with approximately 2.0 km (1.2 miles) planned within the parkway right-of-way in the project area.

Mississippi Department of Transportation

The replacement of the parkway motor road bridge over I-55, as part of the interstate highway improvements by the Mississippi Department of Transportation, is scheduled to begin in early 2001.

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ALTERNATIVES, INCLUDING THE PROPOSED ACTION

The alternatives analyzed in this *Final Supplemental Environmental Impact Statement* are the result of planning efforts conducted over the past two years for parkway motor road construction at Old Agency Road (project 3P13) in the vicinity of Jackson, Mississippi. Studies conducted in 1998 considered 16 conceptual alternatives for the parkway motor road and local public roads on parkway land, which were evaluated and presented for public review and comment in November 1998. These conceptual alternatives were based on comments and recommendations provided by the public during the scoping phase of this planning process.

Following public review and NPS evaluation of the conceptual alternatives, four concepts were determined to be most consistent with the proposed project's purpose. Criteria used to evaluate and select these alternatives included the legislated purpose of the parkway, national parkway design criteria, engineering feasibility, sustainability, readily evident major adverse impacts on the quality of the human environment, and public comment received to date. These four concepts were further refined and are analyzed in this *Final Supplemental Environmental Impact Statement* as alternatives 1, 2, 3, and 4. Alternative 1 is the alternative that was originally proposed in the 1978 *Final Environmental Impact Statement;* it is included in this document as the no-action alternative to provide a baseline for comparing the other alternatives. Alternative 5, the proposed action considered in the *Draft Supplemental Environmental Impact Statement,* was a modification of the 1978 design and was defined for detailed evaluation following the review and analysis of additional public comments received on the public newsletters distributed in late 1999 and early 2000. This *Final Supplemental Environmental Impact Statement* was refined following public comments received on the draft document in order to address concerns related to access, circulation, safety, and traffic capacity. These refinements are presented in a revised proposed action, which incorporates elements similar to those presented in alternatives 2 and 5. The conceptual alternatives that were eliminated from consideration are discussed later in this chapter under "Alternatives Considered But Not Analyzed in Detail" (see page 34).

Each of the alternatives considered (including no action) would complete 1.8 kilometers (1.1 mi.) of the parkway motor road, would consider options for the treatment of Old Agency Road (Old Natchez Trace), would accommodate future east-west local traffic, and would provide access to adjacent residential neighborhoods. During the engineering design phase all approved roads and intersections would be designed to meet standards of the American Association of State Highway and Transportation Officials (AASHTO) for sight distance, safety, and alignment. Design elements for the parkway motor road are discussed below. At the end of this chapter mitigations for special resource concerns are discussed, followed by summaries of the alternatives in table 2 and of the environmental consequences in table 3.

PARKWAY DESIGN

By design, the parkway motor road is intended to offer a pleasurable visitor experience without disrupting the natural, cultural, or socioeconomic environment. The following design descriptions apply to all parkway alternatives.

The proposed parkway motor road, project 3P13, would consist of two paved travel lanes, each 3.35 meters (11 ft.) wide. The total paved travel lane width would be 6.7 meters (22 ft.). The pavement would typically consist of an aggregate base 25 centimeters (10 in.) deep beneath 12.5 centimeters (5.0 in.) of hot-mix asphaltic concrete. Site conditions could cause slight variations in these depths.

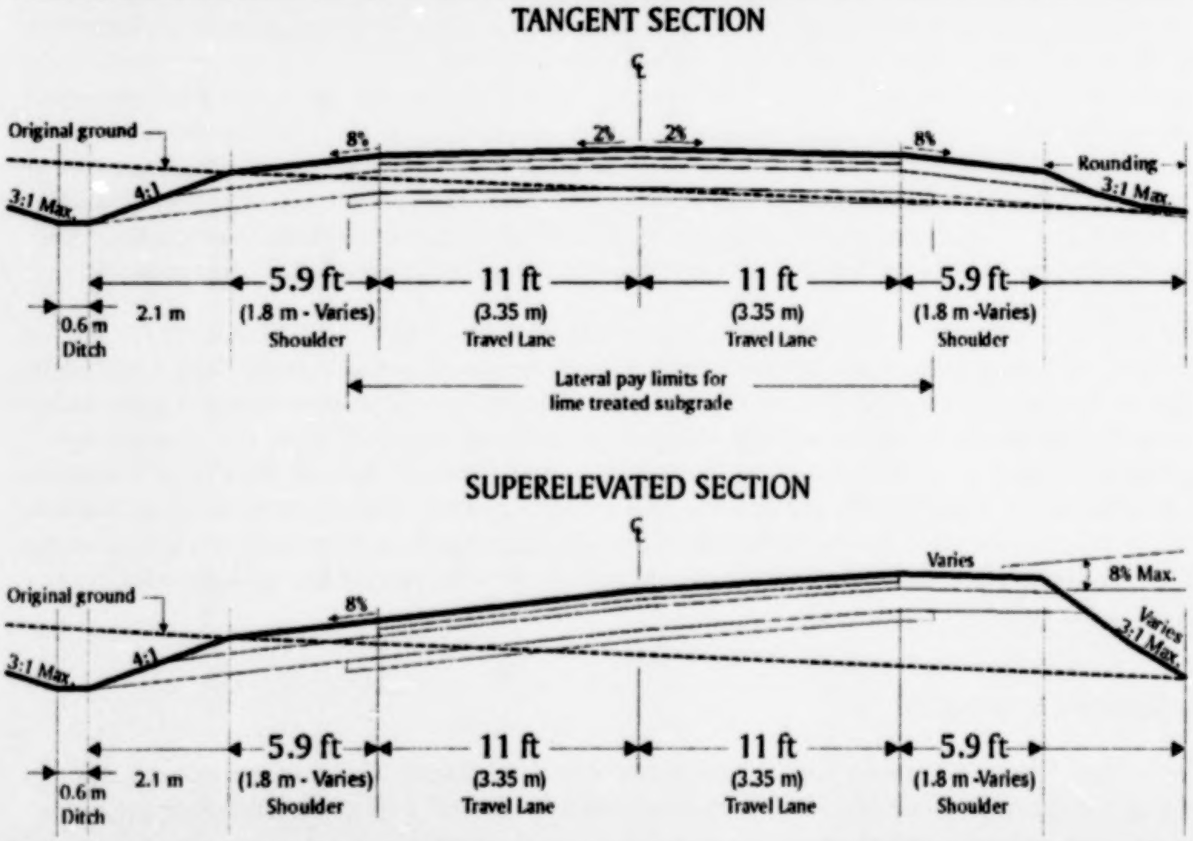
Shoulders would not be paved, but instead would consist of a mixture of topsoil and aggregate to support grass cover. These grass shoulders would be 1.8 meters (6 ft.) wide. The cut-and-fill slopes would normally have a maximum slope ratio of 3:1 (see Typical Parkway Cross Section).

The posted speed limit is 80 kilometers per hour (50 mph), except it would be decreased to 72 kilometers per hour (45 mph) as it approached I-55 in Ridgeland.

For most of its length, the parkway motor road would remain approximately at-grade. The intent is to allow the parkway motor road to lie "lightly on the land," following the existing terrain as closely as possible, with the understanding that substantial cuts and fills would be required to accommodate the design speed. The motor road would cross drainageways and local roads using a variety of structures, ranging from simple pipe culverts to bridges. Bridges, piers, and abutments would typically be concrete. Where aesthetics dictate, bridges would be specially designed utilizing special forms, materials, and detailing.

Parkway design criteria established to distinguish national parkways are described in the "Purpose of and Need for Action" chapter under the section entitled "Primary Parkway Experience" (see page 3).

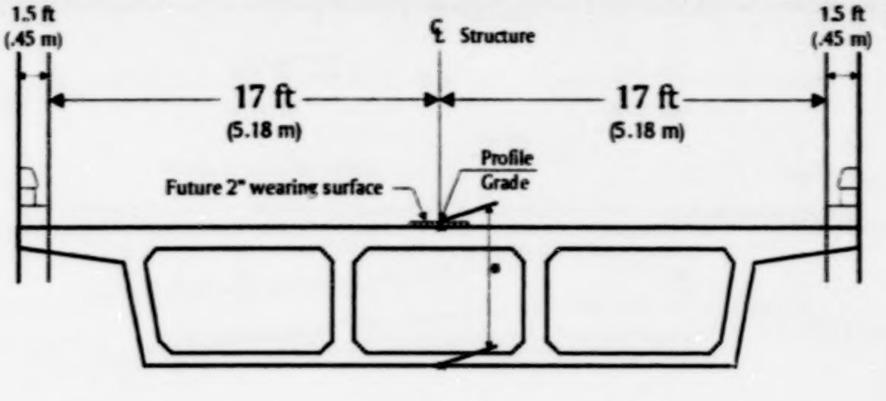
TYPICAL PARKWAY MOTOR ROAD — CROSS SECTION



TANGENT SECTION

SUPERELEVATED SECTION

TYPICAL PARKWAY BRIDGE — CROSS SECTION



* Depth varies along length of structure

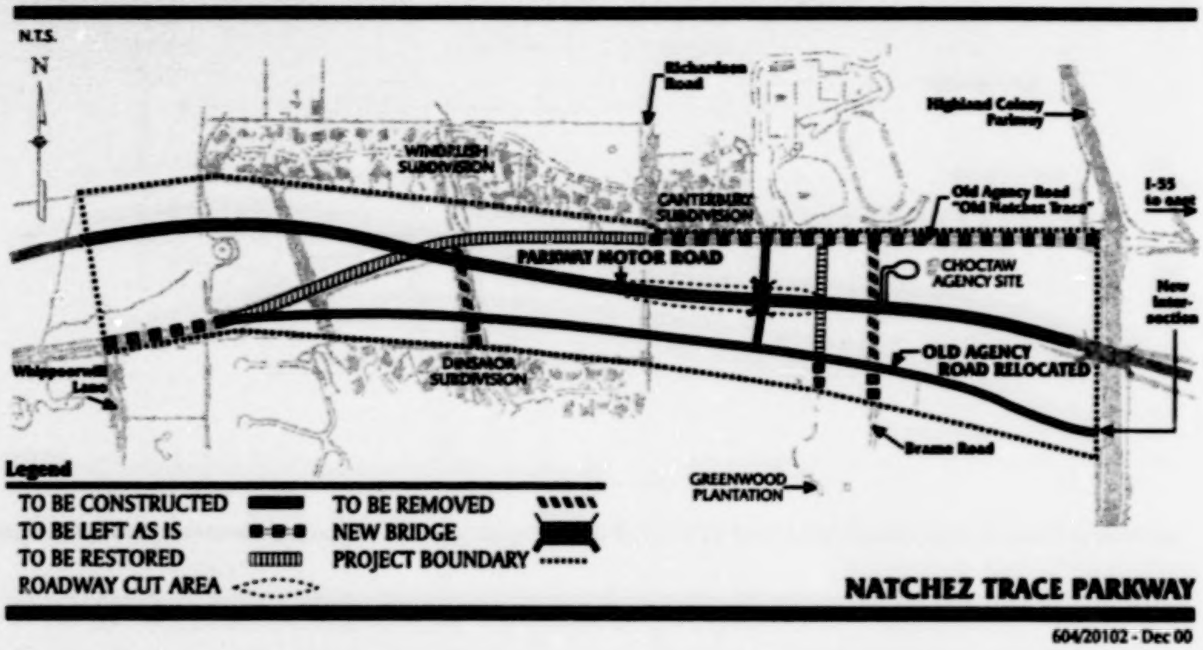
REVISED PROPOSED ACTION — OLD AGENCY ROAD RELOCATED / NEW CROSSOVER ROAD BRIDGE OVER PARKWAY MOTOR ROAD

The revised proposed action was developed subsequent to the public review of the *Draft Supplemental Environmental Impact Statement*. Compared to alternative 5 (the proposed action in the draft document), it would improve east-west access as well as north-south circulation patterns for subdivisions on either side of the NPS right-of-way. It would increase safety for eastbound traffic transitioning from Old Agency Road to Old Agency Road Relocated, which would be built to higher standards. Also, it would allow for the construction of a shorter bridge over the parkway motor road that would be farther from existing residential development.

Under the revised proposed action project 3P13 of the Natchez Trace Parkway motor road would cross the Old Natchez Trace approximately at-grade and closely follow the existing contour through the NPS right-of-way, similar to the other alternatives presented in the *Draft Supplemental Environmental Impact Statement.* It would connect to the eastern portion of the parkway by means of a bridge over the Highland Colony Parkway. To provide local access, circulation, and traffic capacity, Old Agency Road Relocated would be constructed south of the parkway motor road from near Whippoorwill Lane to Highland Colony Parkway. To further enhance local traffic and circulation, a new north-south crossover road would be constructed between Old Agency Road and Old Agency Road Relocated, and it would bridge over the parkway motor road. Access to the Choctaw Agency site would be provided directly from the parkway motor road, and a parking area for visitors would be developed. (See the plan of the revised proposed action and the bridge simulation. These plans are conceptual and are intended only to illustrate the actions proposed in this alternative.)

Old Agency Road from near Whippoorwill Lane to Richardson Road would be closed to vehicular traffic and restored to Old Natchez Trace appearances (the asphalt road surface would be removed, the surface would be graded to drain, planted with turf grasses, and kept mowed); vehicular traffic would be rerouted to Old Agency Road Relocated. In addition, short portions of Brame Road, a portion of the northern entrance to the Dinsmor subdivision, and a portion of the Greenwood Plantation driveway would also be closed within the NPS right-of-way and revegetated.

REVISED PROPOSED ACTION — OLD AGENCY ROAD RELOCATED / NEW CROSSOVER ROAD BRIDGE OVER PARKWAY MOTOR ROAD



The Old Trace would be interpreted for the public by means of a standard "Old Natchez Trace" identification marker posted adjacent to the parkway motor road. The closed portion of the Greenwood Plantation driveway would also be restored to its historical appearance.

Old Agency Road Relocated would provide access and circulation for local through-traffic, and a new intersection would be constructed at Highland Colony Parkway. Access to the Dinsmor subdivision and the Greenwood Plantation driveway would be provided from Old Agency Road Relocated. Brame Road would directly intersect with Old Agency Road Relocated at its current location. Access to I-55 would be provided by way of both Old Agency Road and Old Agency Road Relocated.

The new crossover road between Old Agency Road and Old Agency Road Relocated would begin approximately across from the entrance to the St. Andrew's School ballfield parking lot. The road would cross over the parkway motor road on a bridge. To allow the construction of a lower profile bridge, the parkway would be placed in a shallow cut approximately 1 meter (3 ft.) deep, allowing for the bridge to pass over the parkway motor road using a flatter arch section. Because the existing grade slopes toward the east at this location (that is, away from the bridge), larger fill slopes for the crossover road would be required to allow the new bridge.

Construction

Major construction elements of the revised proposed action alternative include the following:

1.8 kilometers (1.1 mi.) of new parkway motor road, including related drainage structures or culverts

1.5 kilometers (0.93 mi.) of Old Agency Road Relocated (see typical road and bridge cross sections, page 16)

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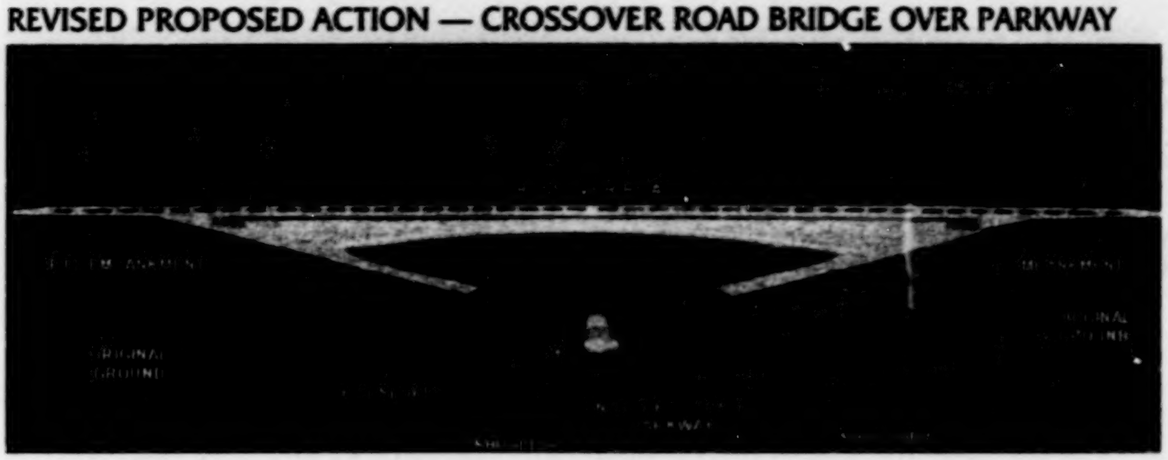
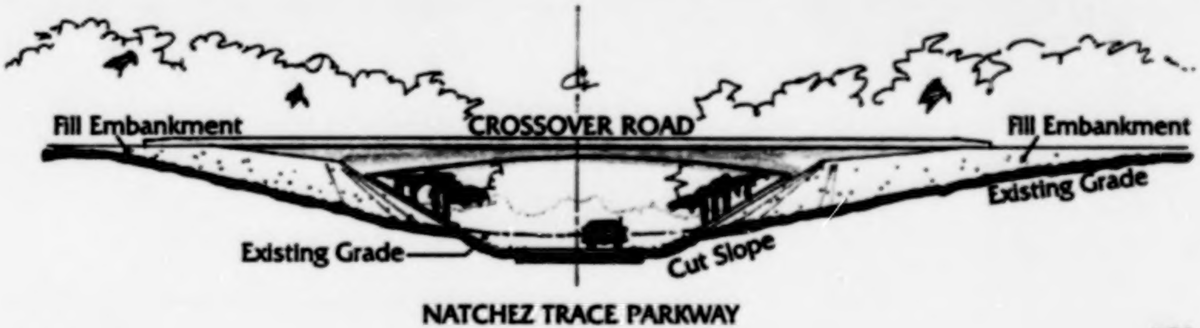
REVISED PROPOSED ACTION — CROSSOVER ROAD BRIDGE OVER PARKWAY





Looking West along the Parkway Motor Road toward the Old Agency Road / Old Agency Road Relocated Crossover Road.

190 meters (623 ft.) of new road between Old Agency Road and Old Agency Road Relocated

a new bridge over the parkway motor road, approximately 88.4 meters (290 ft.) long (including wingwalls) and 7.0 meters (23 ft.) high (from the lower road pavement to the top of the bridge railing)

an intersection at Old Agency Road Relocated and Highland Colony Parkway

an access road to the Choctaw Agency site

a connection from Old Agency Road Relocated to Brame Road

access to the Dinsmor subdivision from Old Agency Road Relocated

access to the Greenwood Plantation driveway from Old Agency Road Relocated

Approximately 1.1 kilometers (0.7 mi.) of existing roadway would be removed and revegetated, including the following:

Old Agency Road from near Whippoorwill Lane to Richardson Road (restored to Old Trace appearances)

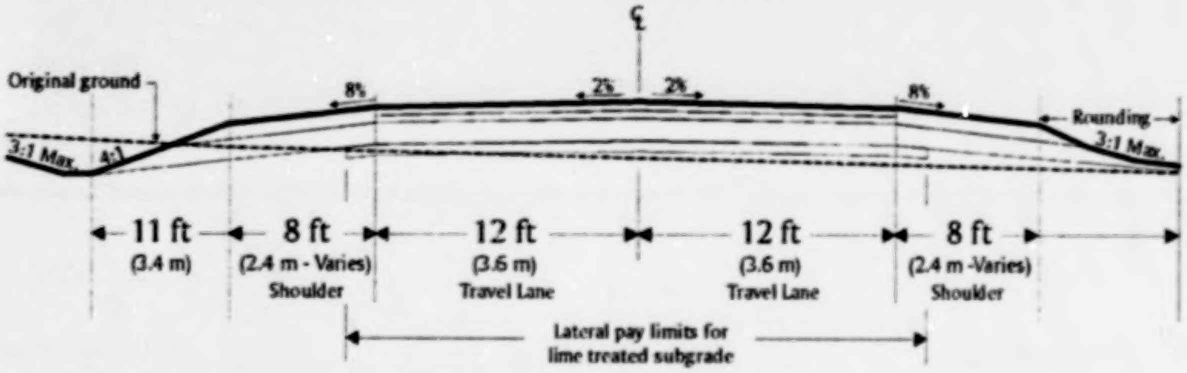
Brame Road within the NPS right-of-way

a portion of the northern entrance to the Dinsmor subdivision within the NPS right-of-way, between Old Agency Road and Old Agency Road Relocated

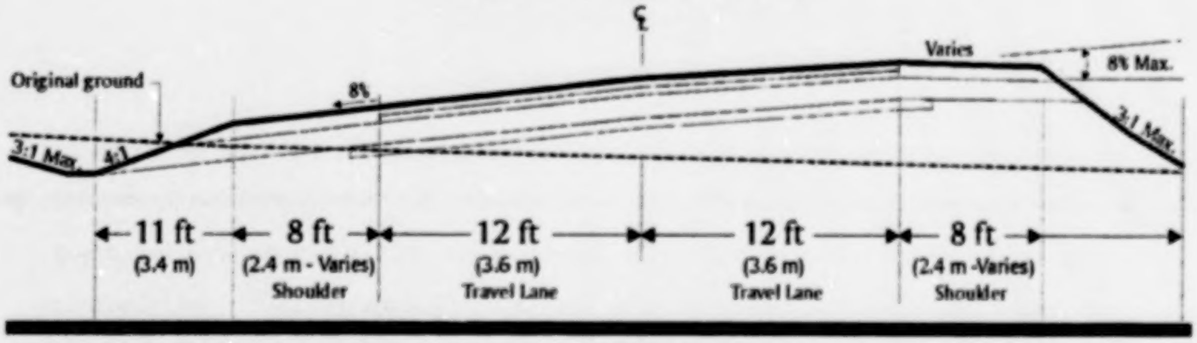
a portion of the Greenwood Plantation driveway within the NPS right-of-way, between Old Agency Road and Old Agency Road Relocated (restored to historical appearances)

TYPICAL OLD AGENCY ROAD RELOCATED — CROSS SECTION

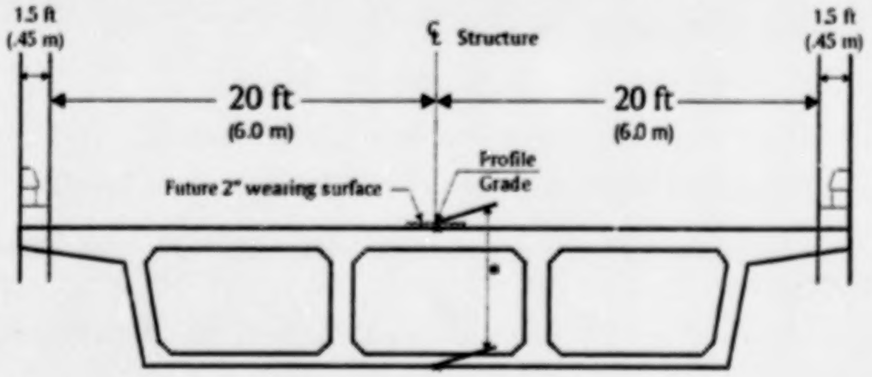
TANGENT SECTION



SUPERELEVATED SECTION



TYPICAL BRIDGE AT OLD AGENCY ROAD RELOCATED — CROSS SECTION



* Depth varies along length of structure

Natural and Cultural Resources

Natural and cultural resources would be managed in accordance with the park's *Resource Management Plan.* Existing forest cover would be retained whenever possible to provide visual screening and noise buffers. Additional vegetative buffers would be planted where necessary along the parkway motor road and Old Agency Road Relocated to screen views of adjacent developed areas. The bridge structure over the parkway motor road for the crossover road and road prism slopes would be designed and constructed to blend with the existing forest cover as much as possible. The road prism and fill slopes at Old Agency Road Relocated and the parkway motor road would also be designed and constructed to blend into the existing forest cover and natural terrain as much as possible. Native plant materials would be used in the parkway revegetation program as appropriate.

Known cultural resource locations would be avoided. Mitigations for special resource concerns are presented on page 30.

Construction Costs

No occupied structures or other land would be acquired under the revised proposed action alternative. Estimated construction costs are approximately $7.7 million dollars (2000 dollars).

ALTERNATIVE 1 — NO ACTION (1978 DESIGN): PARKWAY BRIDGE OVER OLD AGENCY ROAD RELOCATED

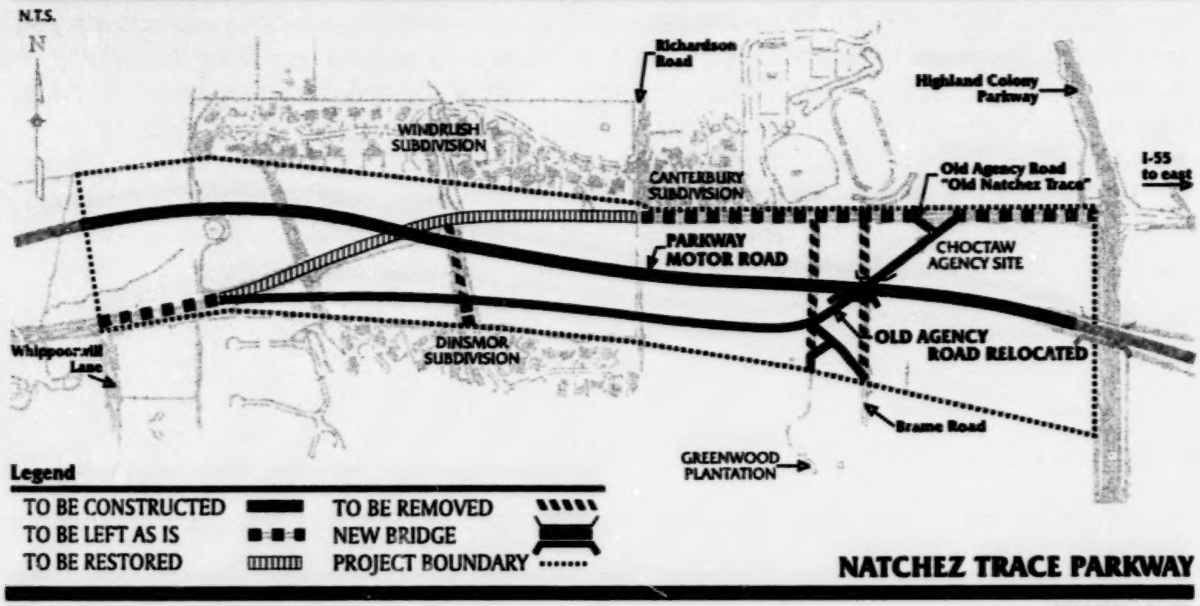
This alternative is the no-action alternative because it would construct this section of the parkway motor road as proposed in the 1978 *Final Environmental Impact Statement.* The parkway motor road would cross the Old Natchez Trace approximately at-grade and closely follow existing contours except for where it would be elevated on a bridge over Old Agency Road Relocated. Vehicle access to and from the parkway would be at I-55. There would be no access to the Choctaw Agency site under this alternative due to the proximity of the proposed parkway bridge and Old Agency Road Relocated.

Similar to the revised proposed action, Old Agency Road from near Whippoorwill Lane to Richardson Road would be closed to vehicular traffic and restored to Old Trace appearances; traffic would be rerouted to Old Agency Road Relocated. Portions of Brame Road, the northern entrance to the Dinsmor subdivision, and the Greenwood Plantation driveway within the NPS right-of-way would also be closed and revegetated. The Old Trace would be interpreted by means of a standard Old Natchez Trace identification marker posted next to the parkway motor road.

To provide access and circulation for local through-traffic, Old Agency Road Relocated would be constructed south of the parkway motor road from near Whippoorwill Lane to Brame Road. The new road would angle north at Brame Road, passing under the parkway motor road to connect to the existing Old Agency Road in the vicinity of the Choctaw Agency site. (Brame Road would be shortened and realigned to intersect with Old Agency Road Relocated.) The new road would not connect to Highland Colony Parkway, which did not exist in 1978. Access to I-55 would be via Old Agency Road. Access to the Dinsmor subdivision and the Greenwood Plantation driveway would be provided from Old Agency Road Relocated. (See the conceptual plan and the bridge simulation.)

Roadway improvements to Old Agency Road east to Highland Colony Parkway would accommodate variations in traffic movements from an improved Old Agency Road Relocated segment, including signs to warn motorists of the change in roadway width. Improvements to Old Agency Road by the

ALTERNATIVE 1 — NO ACTION (1978 DESIGN): PARKWAY BRIDGE OVER OLD AGENCY ROAD RELOCATED



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city of Ridgeland (which has jurisdiction over this road) would be considered in consultation with the National Park Service and the Mississippi Department of Archives and History.

Construction

Major construction elements of alternative 1 include the following:

1.8 kilometers (1.1 mi.) of new parkway motor road, including related drainage structures or culverts

a parkway motor road bridge over Old Agency Road Relocated approximately 90.0 meters (295 ft.) long and 6.4 meters (21 ft.) high

1.4 kilometers (0.87 mi.) of Old Agency Road Relocated

access to the Dinsmor subdivision from Old Agency Road Relocated

access to a Greenwood Plantation driveway from Brame Road extended

Approximately 1.1 kilometers (0.7 mile) of roads would be removed and revegetated, including the following:

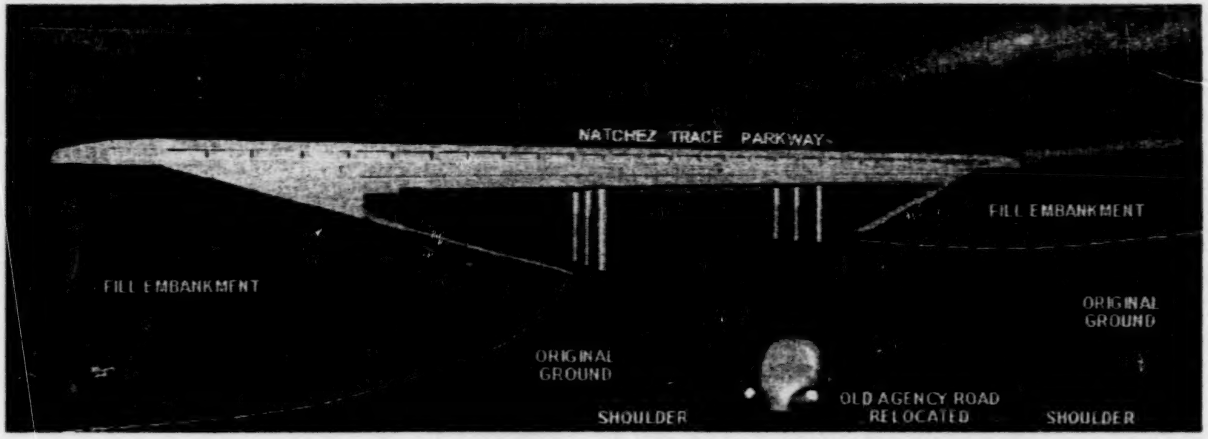
Old Agency Road from approximately Whippoorwill Lane to Richardson Road (restored to Old Trace appearances)

Brame Road within the existing NPS right-of-way

a portion of the northern entrance to the Dinsmor subdivision within the NPS right-of-way, between Old Agency Road and Old Agency Road Relocated

a portion of the Greenwood Plantation driveway within the NPS right-of-way, between Old Agency Road and Brame Road extended

ALTERNATIVE 1 — PARKWAY BRIDGE OVER OLD AGENCY ROAD RELOCATED



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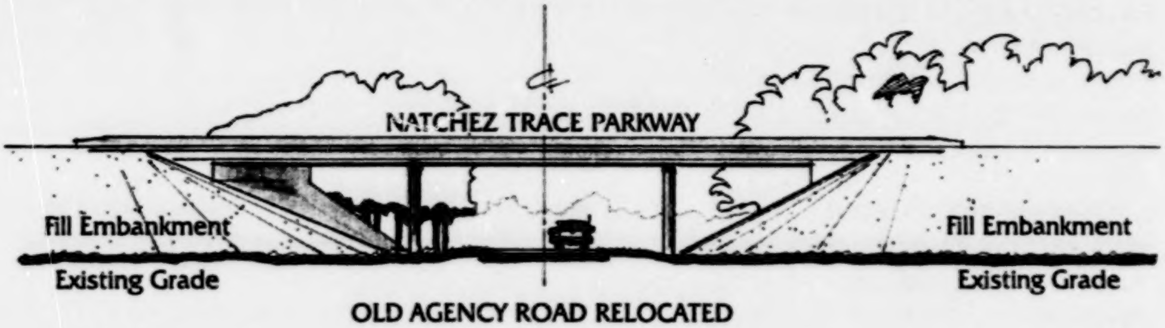


Looking West along Old Agency Road Relocated toward the Parkway Bridge

Natural and Cultural Resources

As described for the revised proposed action, natural and cultural resources would be managed in accordance with the park's *Resource Management Plan.* Existing forest cover would be retained wherever possible to provide visual screening and noise buffers. Additional vegetative buffers would be planted along the parkway motor road where necessary to screen views of Old Agency Road Relocated and adjacent developed areas. This would also help maintain the integrity of the parkway motor road character. The bridge structure, road prism, and fill slopes at Old Agency Road Relocated would be designed and constructed to blend into the existing forest cover as much as possible. Cut and fill slopes along the new segment of parkway motor road would also blend into the natural terrain.

Known cultural resource locations such as the Choctaw Agency site would be avoided. A portion of Old Agency Road Relocated would pass through the site, as shown in the alternative 1 plan; however, during design the alignment would be shifted to avoid the site. In 1978, when this alternative was developed, the boundaries of the Choctaw Agency site were not known. Mitigations for special resource concerns are presented on page 30.

Construction Costs

No occupied structures or other land would have to be acquired under this alternative. Estimated construction costs are approximately $7.4 million (2000 dollars).

ALTERNATIVE 2 — OLD AGENCY ROAD RELOCATED

In alternative 2 the parkway motor road would cross the Old Natchez Trace approximately at-grade, the same as the revised proposed action and alternative 1, and would closely follow the contour of existing ground except where it connected to the bridge over Highland Colony Parkway. Vehicles traveling on the parkway would enter and exit at I-55. As described for the revised proposed action, access to the Choctaw Agency site for interpretation would be provided directly from the parkway motor road, and a parking area would be provided for visitors.

Like the revised proposed action and alternative 1, Old Agency Road from near Whippoorwill Lane to Richardson Road would be closed to vehicular traffic and restored to Old Trace appearances; traffic would be rerouted to Old Agency Road Relocated. Portions of Brame Road, the northern entrance to the Dinsmor subdivision, and the Greenwood Plantation driveway would also be closed and revegetated within the NPS right-of-way. The Old Trace would be interpreted for the public by posting a standard Old Natchez Trace identification marker next to the parkway motor road.

As described for the revised proposed action, Old Agency Road Relocated would be constructed south of the parkway motor road between Whippoorwill Lane and Highland Colony Parkway to provide access and circulation for local through-traffic from adjacent residential areas. There would be no connecting road from Old Agency Road to Old Agency Road Relocated under this alternative. A new intersection would be constructed at Highland Colony Parkway. Access from the residential area on the south to Highland Colony Parkway would be provided via Old Agency Road Relocated. Access from developments on the north side of the parkway motor road would continue to use Richardson Road and Old Agency Road eastbound to Highland Colony Parkway and I-55. (See the alternative 2 plan.)

Construction

Major construction elements of alternative 2 include the following:

1.8 kilometers (1.1 mi.) of new parkway motor road, including related drainage structures or culverts

1.5 kilometers (0.93 mi.) of Old Agency Road Relocated

an intersection at Old Agency Road Relocated and Highland Colony Parkway

an access road to the Choctaw Agency site

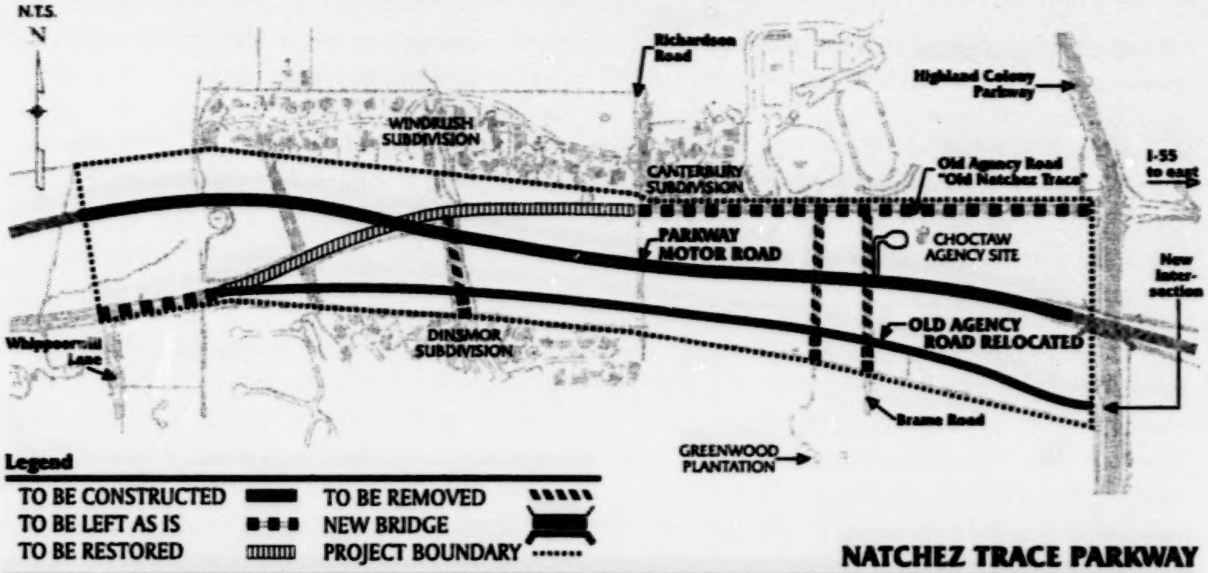
access to the Dinsmor subdivision from Old Agency Road Relocated

access to the Greenwood Plantation driveway from Old Agency Road Relocated

a connection to Brame Road south of Old Agency Road Relocated

Approximately 1.0 kilometer (0.6 mile) of existing roadways would be removed and revegetated, including the following:

ALTERNATIVE 2 — OLD AGENCY ROAD RELOCATED



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a portion of the existing Old Agency Road from near Whippoorwill Lane to Richardson Road (restored to Old Trace appearances)

Brame Road within the NPS right-of-way north of Old Agency Road Relocated

a portion of the northern entrance to the Dinsmor subdivision within the NPS right-of-way, between Old Agency Road and Old Agency Road Relocated

a portion of the Greenwood Plantation driveway within the NPS right-of-way, between Old Agency Road and Old Agency Road Relocated

Natural and Cultural Resources

Natural and cultural resources would be managed as described in the revised proposed action and alternative 1. Additional vegetative buffers would be planted along the parkway motor road where necessary to screen views of Old Agency Road Relocated and adjacent developed areas. This would also help maintain the integrity of the parkway motor road character. The road prism and fill slopes at Old Agency Road Relocated would be designed and constructed to blend into the existing forest cover as much as possible. Cut and fill slopes along the new segment of parkway motor road would also blend into the natural terrain.

Known cultural resource locations would be avoided. Mitigations for special resource concerns are presented on page 30.

Construction Cost

No acquisition of occupied structures or other land would be required under this alternative. Estimated construction costs are approximately $6.3 million (2000 dollars).

ALTERNATIVE 3 — OLD AGENCY ROAD RELOCATED / PARKWAY BRIDGE OVER RICHARDSON ROAD EXTENSION

The horizontal alignment of the parkway motor road in alternative 3 would be identical to the revised proposed action and alternatives 1 and 2; it would cross the Old Natchez Trace approximately at-grade and would closely follow the contour of existing ground except where it would be elevated to bridge over an extension of Richardson Road. The parkway motor road would connect to the bridge over Highland Colony Parkway. Vehicles traveling on the parkway would enter and exit at I-55. Like the revised proposed action and alternative 2, access to the Choctaw Agency site for interpretation would be provided directly from the parkway motor road, and a parking area would be provided for visitors.

Old Agency Road from near Whippoorwill Lane to Highland Colony Parkway would be closed to vehicular traffic and would be restored to Old Trace appearances (under the previous alternatives it would only be closed to Richardson Road); traffic would be rerouted to Old Agency Road Relocated. The Old Trace would be interpreted for the public by placing a standard Old Natchez Trace identification marker next to the parkway motor road. Also, portions of Brame Road, the northern entrance to the Dinsmor subdivision, and the Greenwood Plantation driveway within the NPS right-of-way would be closed and revegetated (similar to the revised proposed action and alternatives 1 and 2).

Old Agency Road Relocated would be constructed south of the parkway motor road to provide access and circulation for local through-traffic from adjacent residential areas, similar to the revised proposed action and alternatives 1 and 2, but under this alternative it would extend from Whippoorwill Lane to Highland Colony Parkway. A new intersection would be provided at Highland Colony Parkway. Access from developments on the north side of the parkway motor road would use Richardson Road, Richardson Road Extension, and Old Agency Road Relocated eastbound to Highland Colony Parkway. (See the alternative 3 plan and the conceptual bridge simulation.)

Construction

Major construction elements of alternative 3 include the following:

1.8 kilometers (1.1 mi.) of new parkway motor road, including related drainage structures or culverts

an extension of Richardson Road south to Old Agency Road Relocated

a parkway bridge over the Richardson Road extension approximately 68.6 meters (225 ft) long and 6.0 meters (20 ft) high

1.5 kilometers (0.93 mi.) of Old Agency Road Relocated

an intersection at Old Agency Road Relocated and Highland Colony Parkway

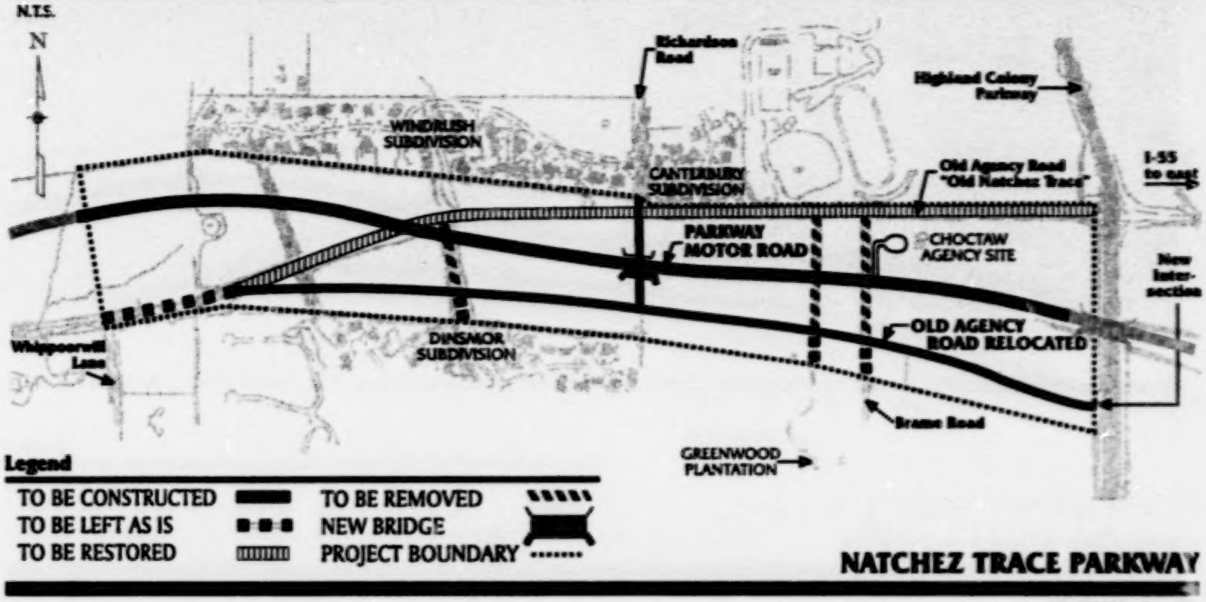
a new access road to the Choctaw Agency site

access to the Dinsmor subdivision from Old Agency Road Relocated

access to the Greenwood Plantation driveway from Old Agency Road Relocated

a connection from Old Agency Road Relocated to Brame Road

ALTERNATIVE 3 — OLD AGENCY ROAD RELOCATED / PARKWAY BRIDGE OVER RICHARDSON ROAD EXTENSION



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Approximately 1.75 kilometers (1.1 mi.) of existing roadway would be removed and revegetated, including the following:

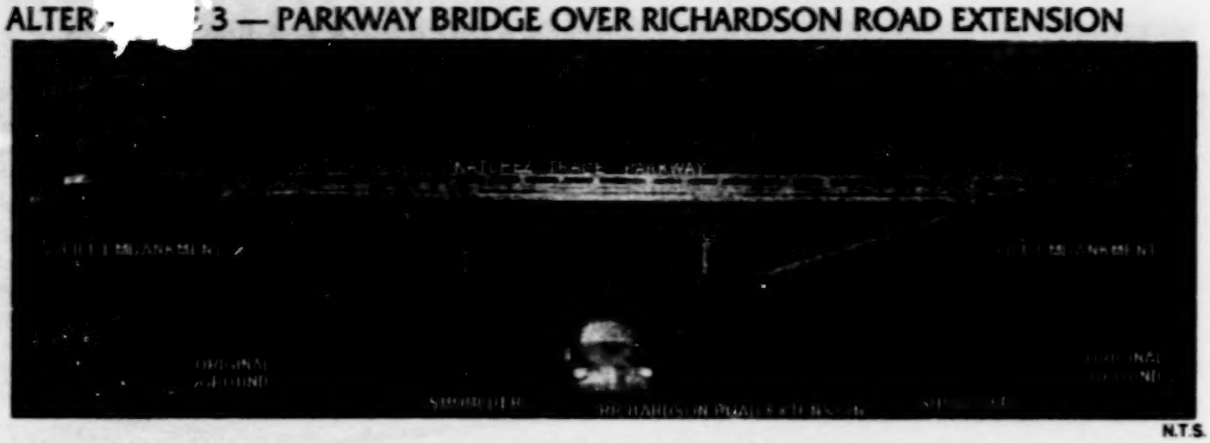
> Old Agency Road from near Whippoorwill Lane to Highland Colony Parkway (restored to Old Trace appearances)
>
> a portion of Brame Road within the NPS right-of-way, between Old Agency Road and Old Agency Road Relocated
>
> a portion of the northern entrance to the Dinsmor subdivision within the NPS right-of-way, between Old Agency Road and Old Agency Road Relocated
>
> a portion of the Greenwood Plantation driveway within the NPS right-of-way, between Old Agency Road and Old Agency Road Relocated

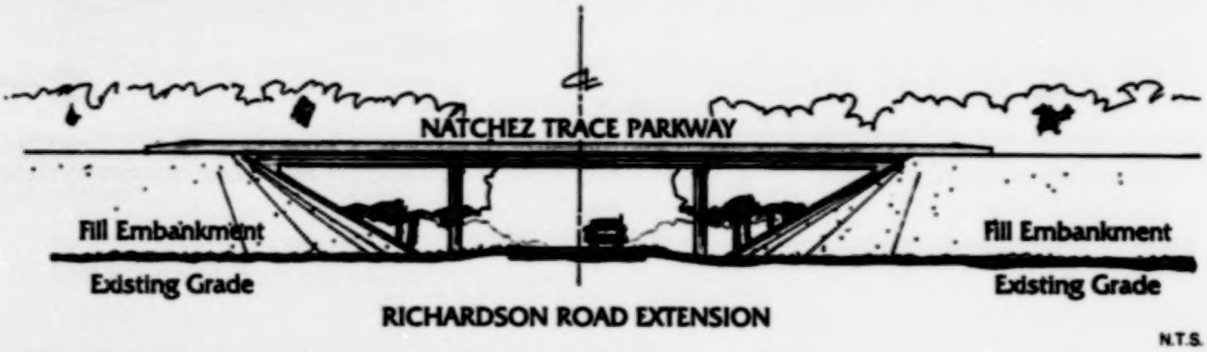
Natural and Cultural Resources

Natural and cultural resources would be managed as described for the previous alternatives. Additional vegetative buffers would be planted along the parkway motor road where necessary to screen views of Old Agency Road Relocated and adjacent developed areas. For the bridge over the extension of Richardson Road, road prism and fill slopes would be designed and constructed to blend with the forest cover as much as possible. The road prism and fill slopes at Old Agency Road Relocated, as well as the parkway motor road, would also be designed and constructed to blend into the forest cover and natural terrain as much as possible.

Known cultural resource locations would be avoided. Mitigations for special resource concerns are presented later in this chapter (see page 30).

ALTER[illegible] 3 — PARKWAY BRIDGE OVER RICHARDSON ROAD EXTENSION





Looking North along Richardson Road Extension toward the Parkway Bridge

Construction Costs

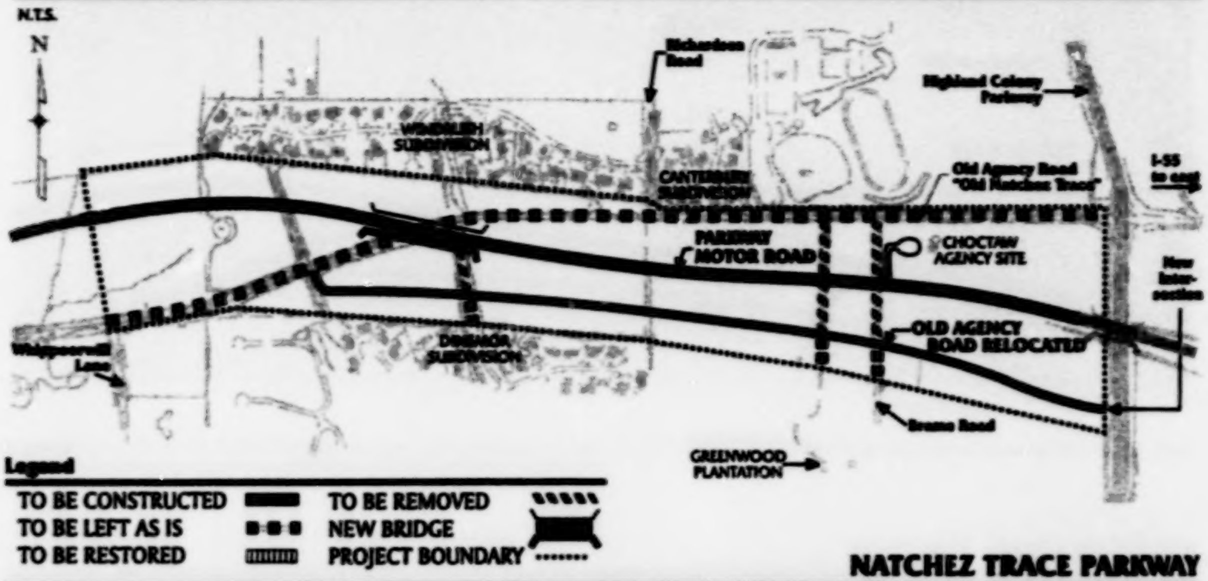
No occupied structures or other land would have to be acquired under this alternative. Estimated construction costs are approximately $7.4 million (2000 dollars).

ALTERNATIVE 4 — OLD AGENCY ROAD RELOCATED / PARKWAY BRIDGE OVER OLD AGENCY ROAD

The horizontal alignment of the parkway motor road in alternative 4 would be identical to the previous alternatives, but under this alternative Old Agency Road would remain open to vehicular traffic. The parkway motor road would follow the natural contours except it would be elevated to bridge over Old Agency Road; the parkway would lie closer to the existing ground contour in the location of Brame Road. The parkway motor road would connect to the bridge over Highland Colony Parkway. Vehicle access to the parkway would be via I-55. Like the revised proposed action and alternatives 2 and 3, access to the Choctaw Agency site for interpretation would be provided directly from the parkway motor road, and a visitor parking area would be provided.

Similar to the previous alternatives, portions of Brame Road, the northern entrance to the Dinsmor subdivision, and the Greenwood Plantation driveway within the NPS right-of-way would be closed to vehicular traffic and revegetated.

ALTERNATIVE 4 — OLD AGENCY ROAD RELOCATED / PARKWAY BRIDGE OVER OLD AGENCY ROAD



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Old Agency Road Relocated would be constructed south of the parkway motor road from near Whippoorwill Lane to Highland Colony Parkway to provide access and circulation for local through-traffic from adjacent residential areas. New intersections would be provided at both ends of Old Agency Road Relocated (Old Agency Road and Highland Colony Parkway).

Access from developments on the north side of the parkway motor road would use Richardson Road and Old Agency Road eastbound to Highland Colony Parkway. Access to the Dinsmor subdivision, Greenwood Plantation, and Brame Road would be provided by way of Old Agency Road Relocated and Highland Colony Parkway. (See the alternative 4 plan and the conceptual bridge simulation.)

Construction

Major construction elements of alternative 4 include the following:

1.8 kilometers (1.1 mi.) of new parkway motor road, including related drainage structures or culverts

a parkway bridge over Old Agency Road approximately 103.7 meters (340 ft.) long and 7.0 meters (23 ft.) high

1.4 kilometers (0.9 mi.) of Old Agency Road Relocated

an intersection at Old Agency Road and Highland Colony Parkway

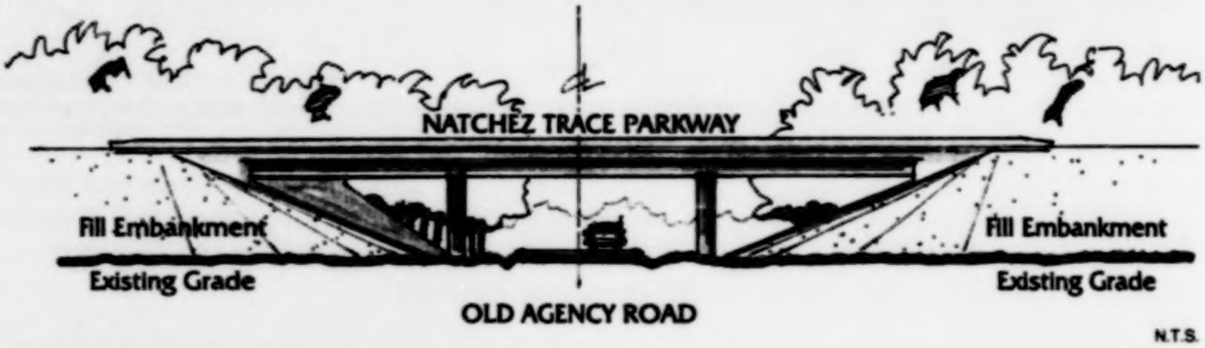
a new access road to the Choctaw agency site

access to the Dinsmor subdivision from Old Agency Road Relocated

access to the Greenwood Plantation driveway from Old Agency Road Relocated

a connection from Old Agency Road Relocated to Brame Road

ALTERNATIVE 4 — PARKWAY BRIDGE OVER OLD AGENCY ROAD



Looking West along Old Agency Road toward the Parkway Bridge

Approximately 0.3 kilometer (0.2 mi.) of existing roadways would be removed and revegetated, including the following:

Brame Road within the NPS right-of-way, between Old Agency Road and Old Agency Road Relocated

a portion of the northern entrance to the Dinsmor subdivision within the NPS right-of-way, between Old Agency Road and Old Agency Road Relocated

a portion of the Greenwood Plantation driveway within the NPS right-of-way, between Old Agency Road and Old Agency Road Relocated

Natural and Cultural Resources

Natural and cultural resources would be managed as described in the previous alternatives. Additional vegetative buffers would be planted where necessary along the parkway motor road to screen views of Old Agency Road Relocated and adjacent developed areas. For the bridge over existing Old Agency Road, the road prism and fill slopes would be designed and constructed to blend with the forest cover as much as possible. The road prism and fill slopes at Old Agency Road Relocated, as well as the parkway motor road, would also be designed and constructed to blend into the forest cover and natural terrain as much as possible.

Known cultural resource locations would be avoided. Mitigations for special resource concerns is presented later in this chapter (see page 30).

Construction Costs

No occupied structures or other land would have to be acquired under alternative 4. Estimated construction cost are approximately $7.9 million (2000 dollars).

ALTERNATIVE 5 — MODIFIED 1978 DESIGN: OLD AGENCY ROAD RELOCATED / BRIDGE OVER PARKWAY

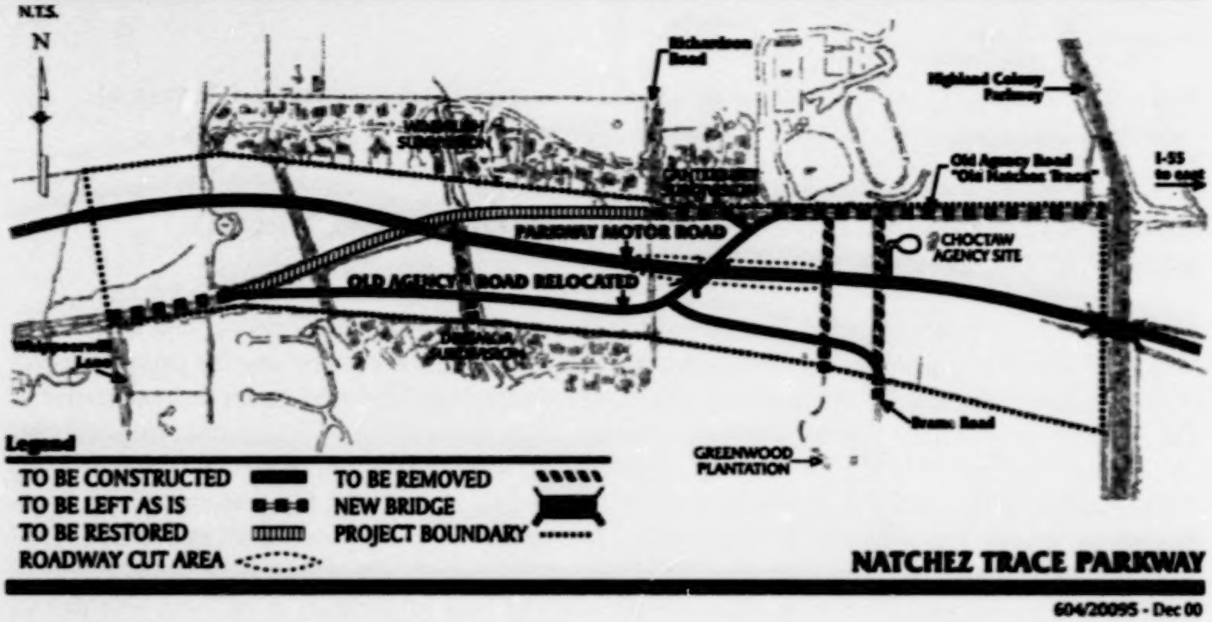
Alternative 5 (the proposed action in the *Draft Supplemental Environmental Impact Statement*) proposes crossing the Old Natchez Trace approximately at-grade and constructing the parkway motor road with a horizontal alignment identical to the other alternatives. However, under this alternative Old Agency Road Relocated would follow a different alignment and would bridge over the parkway motor road approximately 150 meters (492 ft.) east of Richardson Road. At this crossing the parkway motor road would be placed in an approximately 3.9 to 4.6 meter (12 to 14 ft.) deep cut section through a rise in topography, which would allow Old Agency Road Relocated to cross over the parkway motor road close to existing grade on a low-profile bridge. The bridge orientation (north-south vs. east-west in the other alternatives) would also decrease its visibility to parkway neighboring subdivisions. Like the revised proposed action and alternatives 2, 3, and 4, access to the Choctaw Agency site would be provided directly from the parkway motor road, and a parking area would be provided for visitors (see the alternative 5 plan and the conceptual bridge simulation).

Similar to the revised proposed action and alternatives 1, 2, and 3, Old Agency Road from near Whippoorwill Lane to Richardson Road would be closed to vehicular traffic and restored to Old Trace appearances; vehicular traffic would be rerouted to Old Agency Road Relocated. Portions of Brame Road, the northern entrance to the Dinsmor subdivision, and the Greenwood Plantation driveway within the NPS right-of-way would also be closed and revegetated. The Old Trace would be interpreted for the public by posting a standard Old Natchez Trace identification marker next to the parkway motor road.

To provide access and circulation for local through-traffic from adjacent residential areas, Old Agency Road Relocated would be constructed south of the parkway motor road, but under this alternative it would extend from Whippoorwill Lane to just west of Brame Road; it would not connect to Highland Colony Parkway. Old Agency Road Relocated would angle north at Richardson Road, passing over the parkway motor road to connect with existing Old Agency Road in the vicinity of the St. Andrew's School parking lot. Brame Road would be realigned to intersect with Old Agency Road Relocated just south of the proposed bridge. Access to I-55 would be provided via Old Agency Road. Access to the Dinsmor subdivision and the Greenwood Plantation driveway would be provided from Old Agency Road Relocated by way of an extension of Brame Road.

To accommodate variations in traffic movements from an improved Old Agency Road Relocated segment to Old Agency Road, improvements could be made to Old Agency Road east to Highland Colony Parkway, including signs to warn motorists of the change in roadway width. Improvements to Old Agency Road by the city of Ridgeland would be considered in consultation with the National Park Service and the Mississippi Department of Archives and History.

ALTERNATIVE 5 — MODIFIED 1978 DESIGN: OLD AGENCY ROAD RELOCATED / BRIDGE OVER PARKWAY



Construction

Major construction elements of alternative 5 include the following:

1.8 kilometers (1.1 mi.) of new parkway motor road, including related drainage structures or culverts

1.1 kilometers (0.7 mi.) of new construction of Old Agency Road Relocated

a bridge over the parkway motor road as part of Old Agency Road Relocated, approximately 99 meters (325 ft.) long and 7.0 meters (23 ft) high

realignment of Brame Road and its connection to Old Agency Road Relocated

access to the Dinsmor subdivision from Old Agency Road Relocated

access to the Greenwood Plantation driveway from Brame Road extended

Approximately 1.1 kilometers (0.7 miles) of existing roadway would be removed and revegetated, including the following:

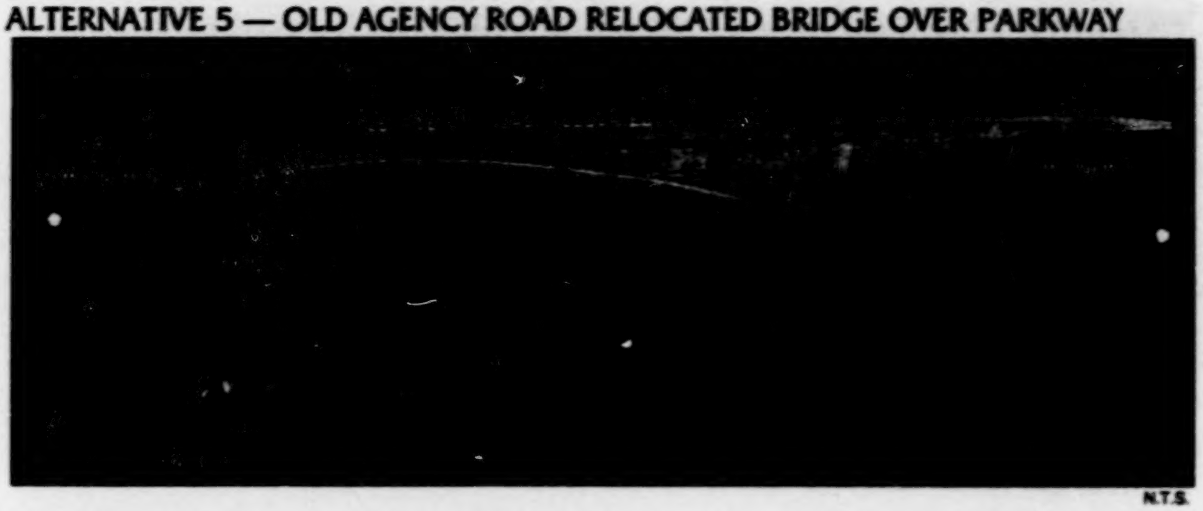
Old Agency Road from near Whippoorwill Lane to Richardson Road (restored to Old Trace appearances)

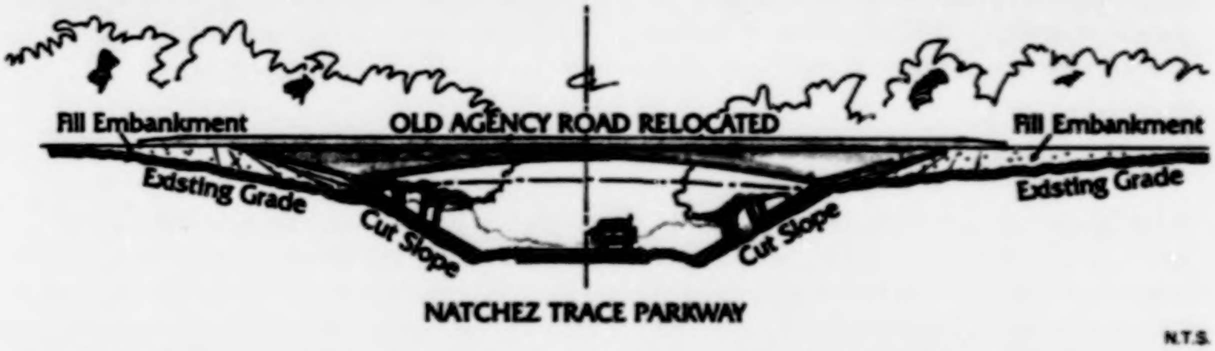
Brame Road within the NPS right-of-way

a portion of the northern entrance to the Dinsmor subdivision within the NPS right-of-way, between Old Agency Road and Old Agency Road Relocated

a portion of the Greenwood Plantation driveway within the NPS right-of-way, between Old Agency Road and Brame Road extended

ALTERNATIVE 5 — OLD AGENCY ROAD RELOCATED BRIDGE OVER PARKWAY





Looking West along Natchez Trace Parkway toward the Old Agency Road Relocated Bridge

Natural and Cultural Resources

Natural and cultural resources would be managed as described for the other alternatives. Additional vegetative buffers would be planted where necessary along the parkway motor road to screen views of Old Agency Road Relocated and adjacent developed areas. The bridge structure over the parkway motor road for Old Agency Road Relocated and road prism cut slopes would be designed and constructed to blend with the existing forest cover as much as possible. The road prism and fill slopes at Old Agency Road Relocated and the parkway motor road would also be designed and constructed to blend into the existing forest cover and natural terrain as much as possible.

Known cultural resource locations would be avoided. Mitigations for special resource concerns are presented on page 30.

Construction Costs

No occupied structures or other land would be acquired under alternative 5. Estimated construction costs are approximately $7.4 million (2000 dollars).

MITIGATIONS FOR SPECIAL RESOURCE CONCERNS

Construction Practices

The National Park Service would flag boundaries for vegetation clearing before work began. These limits are typically 4.6 meters (15 ft.) beyond the rounding of cut-and-fill slopes. Vegetation and other material outside the construction boundary would be disturbed only in the case of selective clearing. Vegetation to be saved would be flagged prior to clearing. Most cleared materials would be removed for disposal offsite. Small timber might be chipped, in which case the chips would be spread evenly over the ground or mounded for use as erosion filters. There would be no burning of any type of material.

With the National Park Service's approval, the construction contractor would select staging areas for vehicles, equipment, and materials. These areas would be at previously disturbed portions of the right-of-way or offsite.

Proposed parklands are generally cleared of as many utilities as possible before construction. Deed-reserved utility easements are provided for city and county utilities. However, all utilities within the parkway boundary would be placed underground, if possible. Deed-reserved easements would be provided for access to private residences, for city streets, and for county or state roads.

Traffic and Noise

A traffic control plan would be prepared to minimize the impacts of construction on Old Agency Road, Highland Colony Parkway, Richardson Road, Brame Road, and the entrances to the Dinsmor subdivision and Greenwood Plantation. Old Agency Road Relocated and new roadway extensions for local use would be constructed before closing or removing any roads. Local residents would be notified of road closures in advance. If parkway construction noise became intrusive, standard construction noise abatement procedures, such as time-of-day work restrictions, could be considered. Vegetation would be used, particularly along Old Agency Road Relocated, to help minimize noise impacts from traffic to residents in the Dinsmor subdivision and at Greenwood Plantation. No residences would be relocated.

Cultural Resources

The National Park Service would implement appropriate measures to mitigate the adverse effects anticipated on historic properties as a consequence of project construction. The restoration of the Old Natchez Trace segment to an appearance typical of the late 18–early 19th centuries (as proposed under all alternatives except 4) would serve to mitigate the adverse effects of the parkway crossing by providing visitors the experience of a cultural landscape representative of that existing at the time of the Trace's primary period of significance. Because the road's patterns of historic circulation and continuous use would be altered or lost, other mitigation measures, such as appropriate photo-documentation, would be used to provide an archival record of Old Agency Road's current appearance. Photo-documentation would also serve to mitigate adverse effects on the Greenwood Plantation driveway resulting from its proposed closure and disturbance by road crossings.

Appropriate screening of new construction by tree/vegetation plantings would serve in part to mitigate the visual intrusion of new construction on the historical setting. It would also serve to dampen the audible effects of traffic noise (of particular concern where the parkway motor road and Old Agency Road Relocated would pass near Greenwood Plantation and the Dinsmor subdivision).

The project area has been assessed for the presence of archeological resources, and the Choctaw Agency site would be avoided by construction disturbance. In all new construction areas an archeologist would be on site to monitor the construction process. If construction in the project area unearthed previously unknown archeological resources, all work would be stopped in that area, and the National Park Service would consult with the Mississippi Department of Archives and History and the Advisory Council on Historic Preservation, under the terms of the 1995 programmatic agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers and in accordance with 36 CFR 800.11.

In compliance with the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001), the National Park Service is developing a memorandum of understanding in consultation with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana to deal with inadvertent archeological discoveries and other concerns. Inadvertent discoveries would be handled by immediately notifying tribal historic preservation officers and Natchez Trace Parkway cultural resource staff. Any adverse effects to potential sites would be mitigated through consultation with tribal groups and would be resolved through avoidance and/or site documentation. All workers would be informed of the penalties for illegally collecting artifacts or intentionally damaging any archeological or historic property. Workers would also be informed of the proper procedures in the event previously unknown resources were uncovered during construction.

Natural Resources

Air Quality

Dust would be controlled by the use of water spread by water trucks. No chemical or petroleum-based dust palliatives would be used.

Soils

The parkway motor road, Old Agency Road Relocated, and new access routes (where applicable) would be constructed through soils classified as silt loams, which have low strength for streets and roads. Low strengths result because the subsoil and underlying clayey material shrinks and swells with seasonal changes in moisture and occasional flooding. To mitigate these effects, a number of steps would be undertaken. All roadway cuts in excess of 0.75 meter (2.5 ft.) would be sampled to a depth of 0.9 meter (3 ft.) below the design subgrade of the roadway. Expansive materials would not be used to construct roadway embankments and would be disposed of outside the roadway construction limits. In addition, where expansive soils were encountered, the roadway would be subexcavated to a depth of 40 centimeters (16 in.) from ditch line to ditch line. The subexcavated surface would then be sealed with moisture barrier fabric to stabilize the moisture content of the subgrade and backfilled with 45 centimeters (18 in.) of aggregate base to structurally support roadway pavement over the expansive subsurface materials. Roadway areas that did not require such mitigation techniques would be stabilized with hydrated lime to minimize seasonal shrink/swell factors (for soils that are clayey but do not meet the definition of "expansive").

Stockpiled topsoil, after having been stripped, would be placed in low windrows along cut-and-fill slopes or other locations. All excess materials or materials unsuitable for reuse would be removed from government property for legal disposal. Construction fill and aggregate would be imported from outside sources.

Erosion and Sediment Control

Erosion and the resulting sediment transport have a variety of potential adverse effects relating to soils, biological productivity, water quality, and aquatic and terrestrial species.

In general, the standard mitigation for controlling soil erosion would be based on "Soil Erosion Control," section 157 in *Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects* (FP-96). Special provisions would be added as necessary based on site-specific conditions. The Federal Highway Administration would prepare a site-specific erosion control plan for the selected alternative and would submit it to the state to obtain an erosion control permit. The plan would detail specific erosion and sediment control measures to be used at specific sites during road construction.

Appropriate erosion control practices would likely include revegetation (seeding); using silt fences, matting, netting, sandbags, and straw bales to contain sediment; allowing natural reestablishment of vegetation cover over denuded areas; and using mulches and cover crops as protective covering for exposed soils. Additional prevention techniques would include the use of silt fencing and the creation of low-gradient slopes where possible. Where necessary, berms and sediment basins would also be used. Biodegradable erosion control blankets would be used as needed on long exposed slopes, drainage channels, and other highly erodible areas. Revetments would be placed to protect fill slopes from water. Permanent seeding for revegetation would be done as soon as possible following excavation and grading.

Before suspending grading operations each day, earthwork would be shaped to minimize erosion from storm runoff. Cut-and-fill slopes would be finished as excavation and embankment construction progressed, with permanent seeding applied as soon as practicable following the finishing of each slope. The installation and maintenance of erosion control devices would be approved and monitored by the Federal Highway Administration and the National Park Service during construction. In highly erodible soils, roadway drainage would be discharged at the base of all slopes to reduce erosion on the slopes themselves. Geotextile fabric and riprap might also be used in drainage channels and at drainage discharge points to further control erosion.

Construction activities and staging would use previously disturbed areas wherever possible. However, where previously undisturbed soils and vegetation were susceptible to compaction and trampling by equipment and workers, topsoil would be stockpiled to help preserve micro-organisms and seeds of native plants. The topsoil would be respread in as near the original location as possible and supplemented with scarification, mulching, seeding, and/or planting with native species and grasses.

Excess excavated material would be used as fill if needed or disposed of at approved locations outside parkway boundaries. All excess fill material needed would be taken from sources outside the parkway. No borrow sources exist within the parkway.

Stream Corridors and Wetlands

Due to the narrow right-of-way adjacent to the proposed parkway motor road, opportunities to avoid stream corridors and wetlands are limited. Thus, wetland impacts would occur under every alternative. Mitigation measures such as those discussed below would be implemented to minimize the extent of wetlands impacted.

Construction practices at stream crossings and wetlands would be designed to have minimum impact on these sensitive areas. Wetlands would be flagged before construction, and construction activities, including travel by heavy equipment, would avoid these areas to the extent possible. Disturbances to streambanks, stream channels, or overstory vegetation would also be avoided or minimized.

Measures to mitigate increased drainage from the parkway motor road would be designed to mirror current natural systems as much as possible. Special care would be taken not to permanently alter local hydrology. Flowing and intermittent streams crossing the proposed parkway would be redirected into culverts. The temporary alteration of drainage patterns might be necessary at some sites, but the original drainage system would be restored immediately following construction.

All possible efforts would be made to span or avoid sensitive areas, with minor alterations in the proposed alignment made where necessary to protect resources. Fording streams or drainages with construction equipment would be forbidden. Toxic materials, hazardous materials, or spills would be handled according to EPA regulations and procedures. Cleaning of machinery would occur in the equipment staging area or in a previously approved upland area away from streams. If necessary, diversion ditches should be constructed around these areas to divert water from the area. Similarly, fueling of all machinery would be conducted only in equipment staging areas away from creek or drainage areas. Equipment would be checked frequently to identify and repair any leaks.

The mitigation measures described above would reasonably protect streams, wetlands, and associated aquatic life from the potential effects of soil erosion and sedimentation during both construction and operation of the parkway.

Revegetation of disturbed areas would occur in accordance with NPS policies and guidelines.

Vegetation and Wildlife Habitat

Parkway construction would require clearing, removing vegetation, and grading. Clearing would be minimized whenever possible to reduce effects on vegetation and wildlife habitat, and also to prevent unnecessary or excessive clearance of overhead tree canopy in densely wooded areas. Plant communities would be reestablished in cleared areas by promptly replanting them with appropriate turf grass species. Tree removal would be limited only to that necessary for parkway construction; where appropriate native trees and shrubs would be planted as part of the parkway's revegetation program. Staging areas would be situated in previously disturbed areas or offsite.

The National Park Service would examine the feasibility of revegetating designated project area lands to improve conditions for wildlife and to compensate for project-related impacts on wildlife habitat. Under this scenario, NPS staff would inventory and evaluate open fields along the proposed parkway. Those with minimal or limited potential for retention as part of the agrarian scene by lessee farmers would be considered for revegetation to help mitigate wildlife habitat disturbed by construction.

Roadside areas would be revegetated using turf grass. Straw mulch would be used; rye grass straw or hay would not be permitted. Appropriate fertilizer and soil supplements would be applied as needed. All chemical applications would follow environmental regulations and current NPS policies.

Socioeconomic Environment — Visual Quality

To the extent possible, vegetation and natural landforms would be preserved to protect the visual character of the local setting and to limit the impact of Old Agency Road Relocated at sensitive viewpoints from the parkway motor road and adjacent residential development. Where appropriate, native trees and shrubs would be used in revegetation programs.

ALTERNATIVE CONCEPTS CONSIDERED BUT NOT ANALYZED IN DETAIL

During the initial planning for project 3P13, 16 conceptual alternatives were considered. These conceptual alternatives were developed in response to public scoping comments received in August 1998 concerning traffic and access, community character, and cultural resource issues. The conceptual alternatives were presented to the public for comment at a public workshop in November 1998. Four of the concepts (A, B, G, and L) are discussed as alternatives 1, 2, 3, and 4, respectively, in this document.

All of the conceptual alternatives were located on right-of-way owned by the National Park Service. The conceptual alternatives are summarized in table 1, along with the reasons for their being eliminated from further consideration.

TABLE 1: ALTERNATIVE CONCEPTS CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

Concepts	Parkway Crossing at Old Agency Road (OAR)	Disposition of Old Agency Road	Treatment of Parkway through Segment (bridge or no bridge)	Old Agency Road Section Relocated	Reasons Concept Eliminated
Concept C	Provide an at-grade crossing with a traffic circle intersection.	Keep open in current condition.	No bridge.	Do not relocate Old Agency Road.	Not consistent with purpose of parkway as a limited access scenic drive. Not consistent with previous NPS plans (1978 *FEIS*). No provision for safe traffic conditions on the parkway (traffic circle / four-way intersection with two-way traffic on Old Agency Road). Increased congestion on parkway motor road because a commuter route would be created on the parkway between Old Agency Road and I-55. Adverse environmental effects on the historic visual character of Old Natchez Trace / Natchez Trace Parkway due to traffic circle or intersection.
Concept D	Provide an at-grade crossing with a traffic circle intersection.	Keep open, but reconstruct to city street standards.	No bridge.	Do not relocate Old Agency Road.	Same as C.
Concept E	Provide an at-grade crossing and a four-way intersection.	Keep open in current condition.	No bridge.	Do not relocate Old Agency Road.	Same as C.
Concept F	Provide an at-grade crossing with a four-way intersection.	Keep open, but reconstruct to city street standards.	No bridge.	Do not relocate Old Agency Road.	Same as C.

Concepts	Parkway Crossing at Old Agency Road (OAR)	Disposition of Old Agency Road	Treatment of Parkway through Segment (bridge/no bridge)	Old Agency Road Section Relocated	Reasons Concept Eliminated
Concept H	Provide a slightly elevated crossing over a low pedestrian underpass.	Close between Whippoorwill Lane and Highland Colony Parkway.	Bridge over Richardson Road extended.	Construct Old Agency Road Relocated between Whippoorwill Lane and Highland Colony Parkway.	Not consistent with previous plans *(Comprehensive Trail Plan).* Concept similar to alternative 3 in this document.
Concept I	Provide a slightly elevated crossing over a low pedestrian underpass.	Close between Whippoorwill Lane and Richardson Road.	No bridge.	Construct Old Agency Road Relocated between Whippoorwill Lane and Highland Colony Parkway.	Concept similar to alternative 2 in this document.
Concept J	Provide a grade-separated crossing.	Keep open in current condition.	Bridge over Old Agency Road.	Do not relocate Old Agency Road.	Concept similar to alternative 4 in this document.
Concept K	Provide a grade-separated crossing.	Keep open, but reconstruct to city street standards.	Bridge over an improved Old Agency Road.	Do not relocate Old Agency Road.	Concept similar to alternative 4 in this document.
Concept M	Provide a grade-separated crossing.	Keep open in current condition with one-way (westbound) traffic.	Bridge over Old Agency Road.	Construct Old Agency Road Relocated between Whippoorwill Lane and Highland Colony Parkway.	Concept similar to alternative 4 in this document.
Concept N	Provide a grade-separated crossing at Old Agency Road and Dinsmor access.	Keep open in current condition.	Bridge over Old Agency Road and Dinsmor access (single bridge)	Do not relocate Old Agency Road.	Severe visual intrusion on surrounding neighborhoods due to extended length/height of bridge Severe construction, engineering, and maintenance costs.
Concept O	Provide a grade-separated crossing.	Keep open in current condition.	Tunnel parkway under Old Agency Road.	Do not relocate Old Agency Road.	Severe construction engineering and maintenance costs.
Concept P	Provide an at-grade crossing.	Close between Whippoorwill Lane and Richardson Road.	Tunnel Old Agency Road under parkway.	Do not relocate Old Agency Road.	Same as O.

Note: Original concepts A, B, G, and L are considered in this document as alternatives 1, 2, 3, and 4, respectively.

SUMMARY OF ALTERNATIVES AND ENVIRONMENTAL CONSEQUENCES

The alternatives are summarized in table 2, and the environmental consequences are summarized in table 3.

TABLE 2: SUMMARY OF THE ALTERNATIVES

	Revised Proposed Action — Old Agency Road Relocated / New Crossover Road / Bridge over Parkway Motor Road	Alternative 1 — No Action (1978 Design): Parkway Bridge over Old Agency Road Relocated	Alternative 2 — Old Agency Road Relocated	Alternative 3 — Old Agency Road Relocated / Parkway Bridge over Richardson Road Extension	Alternative 4 — Old Agency Road Relocated / Parkway Bridge over Old Agency Road	Alternative 5 — Modified 1978 Design: Old Agency Road Relocated / Bridge over Parkway
Parkway Motor Road	Construct 1.8 km (1.1 mi.) parkway motor road.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.
Old Natchez Trace Crossing	Cross approximately at-grade.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.	Bridge over Old Natchez Trace (Old Agency Road).	Same as the revised proposed action.
Bridge Structure	Construct a bridge ±88.4 m (290 ft.) long and 7.0 m (23 ft) high over the parkway motor road (in a 1 m [3 ft.] cut).	Construct a parkway bridge ±90 m (295 ft.) long and 6.4 m (21 ft.) high over Old Agency Road Relocated.	No bridge.	Construct a parkway bridge ±68.6 m (225 ft.) long and 6.0 m (21 ft.) high over the Richardson Road extension.	Construct a parkway bridge ±103.7 m (340 ft.) long and 7.0 m (23 ft.) high over Old Agency Road.	Construct a bridge ±99 m (325 ft.) long and 7.0 m (23 ft.) high over the parkway motor road (in a 3.9–4.6 m [12–14 ft.] cut).
Old Agency Road	Close from near Whippoorwill Lane to Richardson Road. Restore to Old Trace appearances.	Same as the revised proposed action.	Same as the revised proposed action.	Close from near Whippoorwill Lane to Highland Colony Parkway. Restore to Old Trace appearances.	Keep open in current condition.	Same as the revised proposed action.
Local East-west Access	Construct 1.5 km (0.93 mi.) Old Agency Road Relocated between Whippoorwill Lane and Highland Colony Parkway.	Construct 1.4 km (0.87 mi.) Old Agency Road Relocated between Whippoorwill Lane and Brame Road; connect to Old Agency Road near the Choctaw Agency site.	Same as the revised proposed action.	Similar to the revised proposed action.	Similar to the revised proposed action except construct 1.4 km (0.9 mi.) Old Agency Road Relocated, starting slightly farther east.	Construct 1.1 km (0.7 mi.) Old Agency Road Relocated between Whippoorwill Lane and east of Richardson Road; reconnect to Old Agency Road east of Richardson Road.
Local North-South Access	Construct a crossover between Old Agency Road Relocated and Old Agency Road	Provide an extension of Brame Road to Old Agency Road Relocated.	No north-south access provided within the project area.	Extend Richardson Road under the parkway motor road to Old Agency Road Relocated.	Old Agency road would remain open.	Extend Brame Road to Old Agency Road Relocated (longer than alternative 1).
Local Roads within NPS Right-of-Way	Provide access to Brame Road, Dinsmor subdivision, and Greenwood Plantation from Old Agency Road Relocated. Remove ±1.1 km (0.7 mi.) of roads and restore / revegetate.	Provide access to Dinsmor subdivision from Old Agency Road Relocated; provide access to Greenwood Plantation from Brame Road extension. Remove ±1.1 km (0.7 mi.) of roads and restore / revegetate.	Similar to the revised proposed action except remove ±1.0 km (0.6 mi.) of roads and restore / revegetate.	Provide access to Brame Road, Dinsmor subdivision, and Greenwood Plantation from Old Agency Road Relocated, plus extend Richardson Road. Remove ±1.75 km (1.1 mi.) of roads and restore / revegetate.	Similar to the revised proposed action except remove ±0.3 km (0.2 mi.) of roads and revegetate.	Provide access to the Dinsmor subdivision from Old Agency Road Relocated; provide access to Greenwood Plantation from Brame Road extended. Remove ±1.1 km (0.7 mi.) of roads and restore / revegetate.
Cost Estimate (2000)	$7.7 million	$7.4 million	$6.3 million	$7.4 million	$ 7.9 million	$ 7.4 million

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TABLE 3: SUMMARY OF ENVIRONMENTAL IMPACTS

Impact Topic	Revised Proposed Action — Old Agency Road Relocated / New Crossover Road Bridge over Parkway Motor Road	Alternative 1 — No Action (1978 Design): Parkway Bridge over Old Agency Road Relocated	Alternative 2 — Old Agency Road Relocated	Alternative 3 — Old Agency Road Relocated / Parkway Bridge over Richardson Road Extension	Alternative 4 — Old Agency Road Relocated / Parkway Bridge over Old Agency Road	Alternative 5 — Modified 1978 Design: Old Agency Road Relocated / Bridge over Parkway
Transportation / Traffic						
Access	Impacts would be adverse, but minor. Access for westbound through-traffic and some local traffic would be relocated, causing adverse impacts on some travel routes. While some travel patterns would change, access would still be provided in all travel directions for each local road.	Impacts would be adverse, but minor. Travel would remain generally the same. Although there would be slight geometric changes in road alignments, access would still be provided in all travel directions for each local road.	Impacts would be adverse and major because some existing roads and travel patterns would be changed as a result of removing traffic from portions of Old Agency Road and developing Old Agency Road Relocated. Traffic from residential areas south of the project area and local east-west through-traffic on Old Agency Road would be diverted to Old Agency Road Relocated, resulting in out-of-direction travel and a short-term inconvenience for local drivers until they adjusted to new travel routes. Over the long term travel times would increase. However, access to all residential areas, roads, and other facilities surrounding the project area would continue to be provided.	Impacts would be adverse and major because existing roads and travel patterns would be changed by rerouting all traffic from Old Agency Road to Old Agency Road Relocated in the project area. Traffic from residential areas both north and south of the project area and local east-west through-traffic on Old Agency Road would be diverted to Old Agency Road Relocated, resulting in out-of-direction travel and inconvenience for local drivers until they adjusted to the new travel routes. Over the long term travel times would increase; however, access to all residential areas, schools, and other facilities surrounding the project area would continue to be provided.	Impacts would be adverse and moderate. There would be short-term impacts as drivers became familiar with the new routes. Over the long term, access would be provided to all local roads. Changes in travel time, due to rerouting, would be minor over the long term.	Same as alternative 1.
Volume	Impacts would be beneficial and moderate, as a portion of existing traffic on Old Agency Road would be diverted to Old Agency Road Relocated. Overall volumes are expected to remain the same. Opening-day traffic volume on the parkway motor road would be ±7,200 vehicles.	Impacts would be beneficial and minor since local road alignments would be relocated and some traffic volume from Old Agency Road would be shifted to Old Agency Road Relocated. Only residents north of the project area would continue to use Old Agency Road east of the entrance to St. Andrew's School. Opening-day traffic volume on the parkway motor road would be ±7,200 vehicles.	Impacts on local roads would be beneficial and moderate, as existing traffic on Old Agency Road would be divided between Old Agency Road and Old Agency Road Relocated after construction. Overall traffic volumes on roads within the project area would remain the same. Opening-day traffic volume on the parkway motor road would be ±7,200 vehicles.	Impacts would be beneficial and major because all traffic on Old Agency Road would be rerouted to Old Agency Road Relocated, a substantially safer and better designed roadway. Opening-day traffic volume on the parkway motor road would be ±7,200 vehicles.	Impacts would be beneficial and moderate as a portion of existing traffic on Old Agency Road would be shifted to Old Agency Road Relocated. Opening-day traffic volume on the parkway motor road would be ±7,200 vehicles.	Same as alternative 1.

Impact Topic	Revised Proposed Action — Old Agency Road Relocated, Crossover Road, Bridge over Parkway, Motor Road	Alternative 1 — [illegible] Design: Parkway Bridge over Old Agency Road Relocated	Alternative 2 — Old Agency Road Relocated	Alternative 3 — Old Agency Road Relocated Parkway Bridge over Richardson Road Extension	Alternative 4 — Old Agency Road Relocated Parkway Bridge over Old Agency Road	Alternative 5 — Modified 1995 Design: Old Agency Road Relocated, Bridge over Parkway
Safety	Impacts would be beneficial and moderate as a result of new roads and intersections with improved sight distances. Emergency vehicle response times for most residents would remain unchanged, but the improved design of Old Agency Road Relocated and the crossover road, alternate travel routes for emergency vehicles, and decreased traffic on Old Agency Road could all improve emergency response times to a minor degree.	Impacts would be beneficial and moderate as a result of constructing new access roads and intersections with improved sight distances. Safety concerns along portions of Old Agency Road could remain unresolved unless addressed by the city of Ridgeland in cooperation with the National Park Service and the Mississippi Department of Archives and History. Emergency vehicle access times would remain basically unchanged.	Impacts would be beneficial and moderate because Old Agency Road Relocated would have improved sight distance, grading, and shoulder width. Safety impacts with open portions of Old Agency Road would remain. Minor, adverse impacts to emergency vehicle response times would occur because of increased travel time to properties south of the parkway; this could be offset by new roads meeting safety standards and allowing faster travel.	Impacts would be beneficial and major because of the removal of vehicular traffic from Old Agency Road within the project area. All traffic would be rerouted to Old Agency Road Relocated, which would be constructed to current safety standards. Emergency vehicle response times would increase for many residents in the vicinity of the project, particularly for those north of the parkway, a moderate adverse impact.	Safety improvements would be minor since Old Agency Road would remain open. Shifting less than 2,000 vehicles per day to Old Agency Road Relocated would not be enough to improve safety conditions on Old Agency Road. Emergency vehicle response times would remain basically unchanged, but could improve because of better road design and additional east-west access.	Same as alternative 1 except minor adverse impacts in emergency vehicle response times could occur for residents along Brame Road and at Greenwood Plantation because of the new access from Old Agency Road Relocated.
			Cultural Resources			
Historic Resources	The parkway motor road crossing of the Old Natchez Trace approximately at grade would truncate this segment, an adverse, moderate effect. Restoring a 0.7 km (0.4 mi.) portion of Old Agency Road to Old Trace appearances and interpreting it would mitigate this effect. Closing a portion of Old Agency Road to vehicular traffic within the NPS right-of-way would alter historical patterns of circulation and continuous use. Removing a portion of the Greenwood Plantation driveway would irretrievably alter the historical approach, an adverse, moderate effect.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action except a 1.4 km (0.9 mi.) portion of the Old Natchez Trace (Old Agency Road) would be closed to vehicular traffic and restored to Old Trace appearances.	Even though the segment of Old Agency Road (Old Natchez Trace) within the NPS right-of-way would remain open to vehicular traffic and would not be truncated by an at-grade crossing, a parkway overpass would nevertheless intrude on the historical setting of the road corridor, resulting in an adverse, major effect. Removing a portion of the Greenwood Plantation driveway would have the same impacts as the revised proposed action.	Same as the revised proposed action.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Archeological Resources	The Choctaw Agency site would be avoided by construction disturbance. Any inadvertent archeological discoveries would result in consultation with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana to ensure appropriate mitigation, in accordance with a memorandum of understanding. The Park Service would take appropriate measures to avoid or mitigate potential adverse effects from public visitation before opening the site to interpretation. The Choctaw and other tribal representatives would be contacted to help develop parkway interpretive materials that were accurate and inclusive of Native Americans' viewpoints.	Similar to the revised proposed action except there would be no impacts related to visitor use at the Choctaw Agency site.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.
Natural Resources						
Air Quality	There would be a negligible impact in both the short and long term, and no violation of national ambient air quality standards for carbon monoxide.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.
Soils	Long-term, negligible impacts would occur due to excavation. Mitigation efforts would prevent soil erosion and would address the expansive characteristics of soils.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Wetlands	Approximately 0.7 ha (1.7 ac.) of wetlands would be permanently filled. Long-term, major adverse impacts would occur to wetlands 4 and 6, resulting in a 40% reduction in the size of the combined wetland areas and dividing the wetlands into four or five separate areas. Long-term, moderate adverse impacts would occur to wetlands 8 and 9. Negligible adverse impacts would occur to wetland 2. No adverse impacts would occur to wetlands 1, 3, and 10. Removing roads could provide opportunities to improve wetland systems in areas 5 and 7. Developing remaining parkway sections to the west would result in an additional loss of 0.6 ha (1.5 ac.) and a cumulative wetland impact to 1.3 ha (3.2 ac.).	Approximately 0.6 hectare (1.5 ac.) of wetlands would be permanently filled. Long-term, major adverse impacts would occur in wetland areas 4, 6, and 8; each wetland would be reduced 35% to 40%, and the remaining sections fragmented. Negligible adverse impacts would occur to wetland 2. No adverse impacts would occur to wetlands 1, 3, 5, 7, 9, and 10. Removing roads could provide opportunities to improve wetland systems in areas 5 and 7. Total cumulative effect with the parkway section to the west would be 1.2 ha (3.0 ac.).	Same as the revised proposed action.	Same as the revised proposed action except there would be <0.1 ha (<0.01 ac.) impact to wetland 7 because of the Richardson Road extension.	Same as the revised proposed action except there would be no opportunity to restore wetland systems in areas 5 and 7 because Old Agency Road would remain open.	Similar to alternative 1, except approximately 0.5 ha (1.4 ac.) of wetlands would be permanently filled. Long-term, major adverse impacts would occur in wetlands 4, 6, and 8; each would be reduced by at least 25%, and the remaining sections fragmented. Negligible adverse impacts would occur to wetland 2. No adverse impacts would occur to wetlands 1, 3, 5, 7, 9, and 10. Removing portions of Old Agency Road and other access roads could provide opportunities to improve wetland systems in areas 5 and 7. Total cumulative effect with the parkway section to the west would be 1.2 ha. (3.0 ac.), the same as alternative 1.
Water Quality	Short-term, negligible adverse impacts would occur from construction activity releasing soil and debris into unnamed streams. Water quality impacts caused by vehicle-contaminated runoff would be long term but negligible because of low traffic volumes on the Natchez Trace Parkway and Old Agency Road Relocated. Stormwater discharged into local streams could result in long-term, minor impacts from increased peak flows. The	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.

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	restoration of removed and relocated roads could benefit local hydrology and drainage patterns.					
Vegetation	Developing new roads and a parking area would result in the loss of ±12.1 ha (30.0 ac.) of vegetation. Removing roads (portions of Old Agency Road, Brame Road, and the Greenwood Plantation driveway) would allow for ±2.1 ha (5.1 ac.) to be restored or revegetated. The long-term impact would be moderate to major within the project area, with a net loss of 10.0 ha (24.9 ac.). Constructing a multi-use trail and other parkway projects to the east and west would cause a permanent cumulative loss of vegetation. Each vegetation type is common in this area, with a negligible impact.	Similar to the revised proposed action except no Choctaw Agency parking area would be provided; vegetation loss would total ±10.5 ha (25.8 ac.). Removing a portion of Old Agency Road and other roads would allow ±2.2 ha (5.2 ac.) to be revegetated. The long-term impact would be moderate to major, with a net loss of 8.3 ha (20.6 ac.).	Similar to the revised proposed action; vegetation loss would total ±11.5 ha (28.4 ac.). Removing a portion of Old Agency Road and other roads would allow ±2 ha (4.9 ac.) to be revegetated, for a net loss of 9.5 ha (23.6 ac.).	Similar to the revised proposed action; vegetation loss would total ±12.1 ha (30.0 ac.). Removing all of Old Agency Road and other roads within the project area would allow ±3.6 ha (8.7 ac.) to be revegetated, for a net loss of 8.5 ha (21.3 ac).	Similar to the revised proposed action except vegetation loss would total ±11.1 ha (27.5 ac.). Removing some roads would allow ±0.4 ha (0.9 ac.) to be revegetated, for a net loss of 10.7 ha (26.6 ac.).	Similar to the revised proposed action except vegetation losses would total ±11.3 ha (27.8 ac.). Removing roads, including a portion of Old Agency Road, would allow ±2.2 ha (5.2 ac.) to be revegetated, for a net loss of 9.1 ha (22.5 ac.).
	Net Vegetation Changes					
Mixed Hardwood	0.8 ha (2.0 ac.)	0.8 ha (2.0 ac.)	0.8 ha (2.0 ac.)	0.8 ha (2.0 ac.)	0.8 ha (2.0 ac.)	0.8 ha (2.0 ac.)
Pine/Oak	3.3 ha (8.3 ac.)	3.2 ha (7.9 ac.)	2.8 ha (6.9 ac.)	2.5 ha (6.4 ac.)	2.9 ha (7.2 ac.)	3.6 ha (8.9 ac.)
Late Successional Fields	2.5 ha (6.3 ac.)	2.6 ha (6.4 ac.)	2.6 ha (6.4 ac.)	2.5 ha (6.4 ac.)	3.6 ha (9.1 ac.)	2.6 ha (6.4 ac.)
Agricultural Fields	3.4 ha (8.3 ac.)	1.7 ha (4.3 ac.)	3.3 ha (8.3 ac.)	2.7 ha (6.4 ac.)	3.4 ha (8.3 ac.)	2.1 ha (5.2 ac.)
Net Total	**10.0 ha (24.9 ac.)**	**8.3 ha (20.6 ac.)**	**9.5 ha (23.6 ac.)**	**8.5 ha (21.3 ac.)**	**10.7 ha (26.6 ac.)**	**9.1 ha (22.5 ac.)**
Wildlife	Wildlife impacts would be minor. Regional populations would probably not decrease because of the long-term loss of 10.0 ha (24.9 ac.) of habitat (after the revegetation/restoration of removed roads). Ongoing development of adjacent parkway segments and a multi-use trail could cause minor cumu-	Similar to the revised proposed action except habitat loss would total 8.3 ha. (20.6 ac.).	Similar to the revised proposed action except habitat loss would total 9.5 ha (23.6 ac.).	Similar to the revised proposed action except habitat loss would total 8.5 ha (21.3 ac.).	Similar to the revised proposed action except habitat loss would total 10.7 ha (26.6 ac.).	Similar to the revised proposed action except habitat loss would total 9.1 ha (22.5 ac.).

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	lative effects to some species because of habitat loss and fragmentation.					
Threatened or Endangered Species, or Species of Special Concern	No federally listed species occur within the project area. The potential loss of habitat would have negligible to minor impacts on Mississippi species of special concern. Mitigation techniques would be used to maintain habitat where important.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action.
			Socioeconomic Impacts			
Consistency with Other Plans	The construction of Natchez Trace Parkway and Old Agency Road Relocated would both be consistent with *Ridgeland's Year 2020 Comprehensive Plan, The Jackson Urbanized Area's Transportation Plan*, and the *Transportation Plan Update for the City of Ridgeland*. The future use of Old Agency Road through the project area is not identified in either transportation plan. Closing a portion of Old Agency Road would not be consistent with the *Comprehensive Plan* map. Providing access to the Choctaw Agency site from the parkway would complement the *Comprehensive Plan's* cultural and historical goals.	Similar to the revised proposed action except lack of access to the Choctaw Agency site would be inconsistent with local cultural and historical goals and policies.	Same as the revised proposed action.	Same as the revised proposed action.	Same as the revised proposed action except keeping Old Agency Road open would be consistent with the *Comprehensive Plan* map.	Same as the revised proposed action.
Visual Resources	Impacts on densely wooded areas would be adverse, long term, and moderate. Impacts to open fields, which contribute to the character of the area, would be long term and major.	Similar to the revised proposed action except it would not be possible to screen views of the parkway bridge over Old Agency Road Relocated with vegetation, a long-	Similar to the revised proposed action except there would be no parkway bridge to intrude on views.	Similar to the revised proposed action except the Richardson Road extension, in addition to a parkway bridge, would cause adverse, short-term, moderate impacts pending the reveg-	Similar to the revised proposed action except a higher and extended parkway bridge over Old Agency Road would create an adverse, long-term, major impact. The change	Similar to alternative 1 except for a different alignment of Old Agency Road Relocated and a low-profile crossing of Old Agency Road Relocated over the parkway, which would slightly in-

	Views from the parkway motor road of adjacent development, as well as views of Old Agency Road Relocated and the crossover road, would be moderate impacts pending the growth of revegetated disturbed areas. The revegetation of low embankments and cut slopes would help screen views of the bridge crossing the parkway motor road, resulting in a moderate visual impact. Changes to the visual experience for users of local roads would be an adverse, long-term, major impact. Completing this section of the parkway motor road, along with using consistent designs and details, would improve the overall visual continuity for parkway users, a long-term, major benefit.	term, moderate impact.		etation of disturbed areas.	in the visual experience for local users would be a moderate impact because Old Agency Road would remain open to vehicular traffic.	terrupt the visual continuity of the parkway experience.
Recreational Users and Facilities	Completing this section of the parkway motor road would improve the continuity of the recreational driving experience, a long-term, major benefit. Providing access to and parking at the Choctaw Agency site would make it easier to offer interpretive and educational programs, thus enhancing the experiences of parkway users and local residents. This would be a long-term, moderate benefit. A multi-use trail would provide local residents, as well as parkway users, additional	Similar to the revised proposed action except not providing access to or parking at the Choctaw Agency site would make it difficult to offer interpretive or educational programs on site, a long-term, minor adverse impact.	Same as the revised proposed action.	Same as the revised proposed action.	Similar to the revised proposed action except users of a multi-use recreational trail would have to cross Old Agency Road, which would continue to carry traffic; this would change the impact from a moderate to a minor beneficial impact over the long term.	Same as the revised proposed action.

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	recreational opportunities, a long-term, moderate benefit.					
Local Residents	Adverse, short-term, moderate impacts to the privacy and seclusion of local residents would occur as a result of clearing mature vegetation and constructing urban standard roadways adjacent to residential subdivisions. A multi-use trail could improve the quality of life for local residents. The amount of out-of-direction travel for access to local activities would be a short-term, minor impact until local residents adjusted to the travel difference. Access to regional attractions would not be affected.	Similar to the revised proposed action except increased out-of-direction travel for local access across the parkway corridor would be a short-term, minor impact.	Similar to the revised proposed action except for adverse, long-term, moderate impacts on local access to regional attractions that would occur without direct access to I-55 from Old Agency Road Relocated.	Similar to the revised proposed action except additional vegetation would be lost due to the extension of Richardson Road. Closing and restoring Old Agency Road to Old Trace appearances from near Whippoorwill Lane to Highland Colony Parkway would increase privacy for residents along the northern parkway boundary, a long-term, major benefit. The Richardson Road extension would provide direct access to local attractions across the parkway corridor. No direct access to I-55 would have a long-term, moderate impact on regional accessibility (similar to alternative 2).	Similar to the revised proposed action except the long parkway bridge over Old Agency Road would have long-term, major impacts on the rural setting, including seclusion and privacy. Many existing access routes to local destinations across the parkway corridor would be retained, requiring minimal out-of-direction travel. There would be a long-term, moderate adverse impact on local access to regional attractions without direct access to I-55 from Old Agency Road Relocated (similar to alternatives 2 and 3).	Similar to alternative 1.
Noise	Noise levels would increase near new roads, a negligible to minor impact in the short term and a minor to moderate impact in the long term. By 2020 the maximum increase would be 13 dB(A). The Choctaw Agency site would have the highest noise level. The maximum increase would not exceed state guidelines, and all noise levels would be less than the FHWA noise abatement criteria for residential and park areas (67 dB(A)).	Similar to the revised proposed action. By 2020 the maximum increase would be 13 dB(A).	Similar to the revised proposed action. By 2020 the maximum increase would be 13 dB(A).	Similar to the revised proposed action. By 2020 the maximum increase would be 12 dB(A).	Similar to the revised proposed action. By 2020 the maximum increase would be 13 dB(A).	Similar to the revised proposed action. By 2020 the maximum increase would be 13 dB(A). The lower road grade along the parkway motor road through cut sections would have minimal effects on traffic-related noise.

AFFECTED ENVIRONMENT

TRANSPORTATION / TRAFFIC ANALYSIS

Natchez Trace Parkway was designed to provide a scenic and historical route for long-distance, interstate recreational travel. Once the segment west of Highland Colony Parkway is constructed, drivers may continue along the parkway motor road uninterrupted. However, the construction of the parkway motor road could affect the following local roads:

Old Agency Road

Brame Road

Greenwood Plantation driveway

Richardson Road

Dinsmor Crossing

St. Andrew's School (private access)

The project area for transportation includes the proposed parkway motor road alignment between Whippoorwill Lane and Highland Colony Parkway, including the local roads within the right-of-way segment. Access, traffic volumes, and safety issues for the roads within or adjacent to the project area are discussed in the following sections.

Access

Currently, the parkway motor road terminates at I-20 on the west and I-55 on the east. Travelers on the parkway motor road must detour around this unconstructed segment on local roads, increasing travel time and out-of-direction travel. Local access to the parkway motor road is provided at the interchange with I-55. No direct local access is provided in the project area, in accordance with the legislation establishing the parkway. Currently there is no formal access from the parkway motor road to the Choctaw Agency site.

Old Agency Road generally runs east-west in the project area and locally serves as a collector street carrying traffic from area residential developments east to I-55. The intersection at Old Agency Road and Highland Colony Parkway is a stop-controlled access with full movement (turning movements in every direction). In the vicinity of the proposed parkway motor road, Old Agency Road provides direct access from Highland Colony Parkway or I-55 to residential areas including the Canterbury, Dinsmor, and Windrush subdivisions. Access is also provided to Greenwood Plantation, and a secondary access is provided to St. Andrew's School and the school athletic fields. The school's primary access has been relocated to Highland Colony Parkway.

Brame Road is a north-south road providing local access between Old Agency Road and Highland Colony Parkway. Brame Road, which bisects the parkway right-of-way south of Old Agency Road, is a paved, two-lane road that provides local access to residences south of the parkway right-of-way. Heading south from Old Agency Road, the Greenwood Plantation driveway is a paved private access road to the plantation residence. The access to Old Agency Road from the Greenwood Plantation driveway also provides full movement.

Richardson Road is a paved, two-lane road, providing north-south access from Old Agency Road to the Canterbury and Windrush subdivisions, as well as other scattered residences and subdivisions north of Canterbury. The access to Old Agency Road from Richardson Road is full movement.

The Dinsmor subdivision is currently accessed from Old Agency Road on the north and Highland Colony Parkway on the south. Dinsmor Crossing, the access from Old Agency Road, is a paved, two-lane road. The access to Old Agency Road from Dinsmor Crossing is full movement.

A secondary access for the St. Andrew's School is located on Old Agency Road just west of the intersection with Highland Colony Parkway. While the school has primary access from Highland Colony Parkway, direct access to the school's athletic fields is now from Old Agency Road, just east of Richardson Road.

Traffic Volume

Present traffic volume on the Natchez Trace Parkway motor road east of I-55 is approximately 7,200 vehicles per day (Traffic Engineering 1991). Opening-day traffic on the proposed parkway motor road is expected to be similar in volume.

Where the parkway motor road passes through urban areas, sections of the road may carry some commuter traffic. Near Ridgeland, commuters use the parkway motor road between I-55 and Old Canton Road for east-west travel. Although the parkway motor road is not intended to serve commuter traffic, it currently provides the most direct and convenient east-west route in the vicinity. There is some concern that when the parkway motor road is extended, short-term commuter traffic will continue to travel on the parkway motor road past I-55. With no other local road improvements, forecasts for 2010 show that east-west traffic on the parkway motor road corridor would double over existing volumes to an estimated 18,000 vehicles per day, which approaches the capacity of a two-lane roadway (Traffic Engineering 1996). Much of this traffic would be attributed to local commuter traffic rather than growth in parkway visitation. In 2020 the demand for east-west travel is expected to increase to over 50,000 vehicles per day (Ridgeland, MS 1996). Because of the parkway's legislated mandate that it be constructed as a two-lane, rural motor road, the roadway width will not be increased to accommodate greater traffic volumes.

The city of Ridgeland's long-range plan includes a number of long-term improvements to extend other roads, including Jackson Street and Rice Road, to provide alternate routes for local traffic. These alternate east-west travel corridors would be essential for reducing commuter traffic on the parkway motor road, which is not designed or intended to accommodate local traffic. Without providing alternative east-west routes for local traffic, the ability of the parkway motor road over time to serve its national function as a recreational route for interstate travelers would be severely impaired.

Traffic on Old Agency Road is primarily local traffic with some through-traffic. As most development is currently located near Highland Colony Parkway, volumes on Old Agency Road decrease as the road heads west from I-55. Between Highland Colony Parkway and Richardson Road volumes were measured at 10,000 vehicles per day, according to traffic counts conducted by the Federal Highway Administration in 1999. Traffic volumes decrease to 3,100 vehicles per day between Richardson Road and Dinsmor Crossing, and to 1,100 vehicles per day west of Whippoorwill Lane (Ridgeland, MS 1996).

Traffic volumes on Brame Road are estimated to be less than 500 vehicles per day based on the limited number of residences on the road and the alternate connection to Highland Colony Parkway.

The Greenwood Plantation driveway serves only the plantation residence, and the daily traffic is estimated at less than 50 vehicles per day. North of Old Agency Road, volumes on Richardson Road were measured at 1,900 vehicles per day. Traffic counts from 1991 show approximately 1,500 vehicles per day on Dinsmor Crossing (Ridgeland, MS 1996).

Safety

Old Agency Road within the project area is a paved, narrow road (6.6 meters / 20 feet wide) with no shoulders. The posted speed limit is 35 mph within the project area. The Federal Highway Administration prepared a safety study on Old Agency Road in March 1999, with revisions in September 1999. The report finds that the narrow road width, bordering ditches, and limited sight distance may contribute to the relatively high accident rate (122 accidents with injuries per 100 million vehicle miles of travel from 1993 to 1998) as compared to the national average (109 accidents with injuries per 100 million vehicle miles of travel, 1993–98) and the Mississippi rural road average (82 accidents with injuries per 100 million vehicle miles of travel, 1993–98). In addition, reduced sight distance can increase driver anxiety when turning from a cross-street onto Old Agency Road. The report presented the following causes of the safety deficiencies:

narrow travel lanes for the volume of traffic

no shoulders

insufficient horizontal clearance; deep ditches and trees are located within the required clear zone

poor roadway profile (dips, bumps, etc.) due to underlying soils (Yazoo clay)

high speeds (the narrow roadway profile does not provide pullout for police to monitor speed violations)

insufficient sight distances at Brame Road, Greenwood Plantation driveway, Richardson Road (east approach), Dinsmor Crossing (west approach), and the St. Andrew's athletic field access

poor drainage that contributes to flooding during heavy rains

CULTURAL RESOURCES

Historic Preservation Compliance

At various times over the past 20 years, the National Park Service and the Mississippi Department of Archives and History (the state historic preservation office) have consulted regarding the construction of project 3P13. Concerted attempts to reach a formal agreement have been underway since 1988. Under a provision of a 1980 memorandum of agreement between the National Park Service, the state historic preservation officers of Mississippi, Alabama, and Tennessee, and the Advisory Council on Historic Preservation, the National Park Service agreed to consult and provide construction plans to the appropriate state historic preservation officer in instances where parkway construction could affect portions of the Old Natchez Trace eligible for the National Register of Historic Places. The Advisory Council on Historic Preservation would also be provided an opportunity to comment in instances where parkway construction could adversely affect the Old Natchez Trace.

At issue over the years has been the anticipated effects of construction on significant historic resources in the project area, namely Old Agency Road, the Choctaw Agency site, and Greenwood Plantation. As a consequence of the ongoing controversy that has delayed selection of a final design alternative, NPS compliance responsibilities under section 106 of the National Historic Preservation Act and the 1980 memorandum of agreement remain unresolved with regard to these historic resources.

The period of significance of the Old Natchez Trace/Old Agency Road has been an item of disagreement between the agencies. The issue is of more than academic interest, as it bears directly on appropriate treatment and mitigation alternatives (i.e., restoration of Old Agency Road to approximate its early 19th century "Old Trace" appearance, or perhaps retention of its current character-defining qualities). The National Park Service has argued that the primary significance of the road segment corresponds to the ca. 1790–1820 period, during which the Natchez Trace received its greatest use as an overland route from Natchez to Nashville. The Mississippi state historic preservation officer has advocated a broader period of significance that encompasses Old Agency Road's evolution from the original Natchez Trace, its subsequent use as a late 19th/early 20th century plantation and farm road, and ultimately its current status as a scenic byway in an urban area.

In 1994 the National Park Service announced its decision to proceed with an at-grade crossing of Old Agency Road by the Natchez Trace Parkway and submitted a draft memorandum of agreement to the Mississippi state historic preservation officer addressing mitigation requirements for the adverse effect determination. Because of the disagreement regarding Old Agency Road's period of significance, and the state historic preservation officer's long-standing objection to closing the road, the state notified the National Park Service in a letter dated April 29, 1994, that it would not sign the memorandum of agreement and that it had elected to withdraw from section 106 review of this particular project. The National Park Service notified the Advisory Council on Historic Preservation of the state's decision and requested direct consultation with the council under provisions of 36 CFR 800.1(c)(1)(ii) and 800.5(e)(6). The National Park Service prepared another draft memorandum of agreement and submitted it to the council, together with summary documentation that subsequently included the national register nomination for the Old Natchez Trace segment and the Choctaw Agency site (the properties were listed on the National Register of Historic Places on February 2, 1995).

The Advisory Council on Historic Preservation responded in a letter dated February 17, 1995, that the National Park Service was procedurally correct in initiating direct consultation with the council. However, the council indicated that it was premature for their office to sign the memorandum of agreement because of questions regarding the project's effects on Greenwood Plantation (which were not addressed in the draft memorandum of agreement), and the possibility that the national register nomination might provide new information, leading to a reappraisal of the significance of the Old Natchez Trace/Old Agency Road and associated project effects. The council recommended that the National Park Service consider bringing other interested parties (e.g., the city of Ridgeland) into the formal section 106 consultation process.

Consultation was suspended until the present effort to undertake a supplemental environmental impact statement. Accordingly, the National Park Service will consult with the council and other interested parties, and upon selection of a preferred alternative, will prepare a revised memorandum of agreement for submittal to the council stipulating proposed mitigation measures.

Historical Overview of the Natchez Trace and the Cultural Landscape

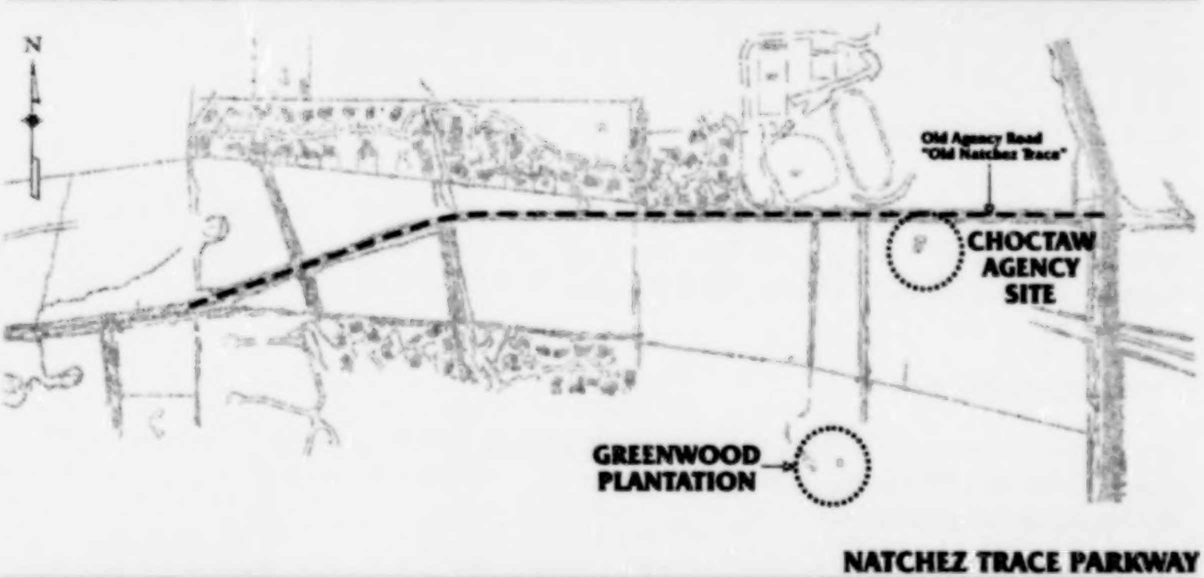
Within the project area, Old Agency Road corresponds to a section of the Old Natchez Trace. The Trace was an important late 18th – early 19th century footpath and road linking Natchez, Mississippi, with Nashville, Tennessee. It evolved from prehistoric Indian trade and hunting paths that later connected Natchez, Choctaw, and Chickasaw villages. By the 1780s, Ohio River Valley settlers began floating their crops and products down the Mississippi River to markets in Natchez and New Orleans. Rather than undertake the arduous upriver return, many sold their flatboats and rode or walked the network of primitive trails leading north from Natchez.

A few decades later, the Trace had become a heavily used wilderness road across the Old Southwest. The hardships faced by those traveling along it during this period were lessened to some extent by the accommodations provided at wayside inns or "stands." Between 1801 and 1807, road widening and other improvements were undertaken by the U.S. Army after the Trace was designated as a federal post road. By the 1820s, however, steamship transportation on the Mississippi River emerged as the dominant means of regional commerce. This factor, combined with the proliferation of alternate roads serving new towns and market centers, contributed to a dramatic decline in overland travel along the Trace. The route became essentially a series of local and county roads.

Sites on the National Register of Historic Places

A 3.3-mile portion of the Old Natchez Trace / Old Agency Road, between I-55 on the east and Livingston Road on the west, was listed in the National Register of Historic Places in 1995. The portion of Old Agency Road outside the NPS right-of-way was designated as a Mississippi landmark in 1988. Even though Old Agency Road is now paved and suburban development borders it, it exhibits qualities recalling its rural heritage. It is narrow and without shoulders, and portions are within high earthen embankments. The curving alignment along this section follows the original route through low rolling hills and stream bottomlands. In some places, trees border the road, creating an enclosed overhead canopy; other areas provide more open vistas where the road crosses fields and pastures.

CULTURAL RESOURCES



NATCHEZ TRACE PARKWAY

SOURCE: National Park Service, Denver Service Center

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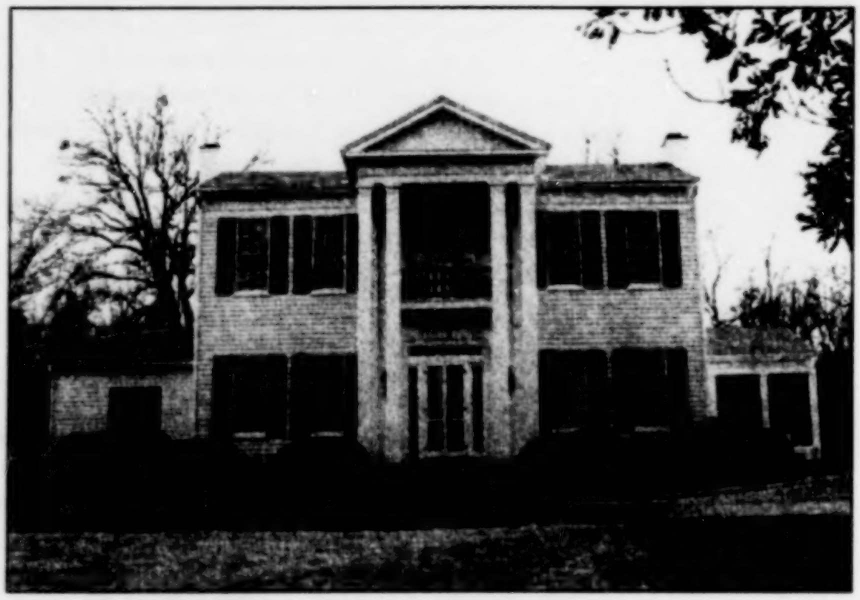
The Choctaw Agency site is a significant archeological resource associated with this section of the Old Natchez Trace, and it was jointly nominated to and listed on the National Register of Historic Places. Archeological remains of the agency building are located northwest of the intersection of the proposed alignment of the parkway motor road and Highland Colony Parkway. From about 1807 to 1821 the agency building served as the residential headquarters of the U.S. government agent responsible for Choctaw Indian affairs. Private individuals occupied it until the 1850s, although by that time it was in poor condition. It was eventually razed in the 1870s.

Greenwood Plantation is located approximately 150 meters (492 feet) south of the southern boundary of the NPS right-of-way at the eastern end of the project area. The privately owned, two-story Greek Revival plantation house was constructed about 1854 by William Fenil Battley, a wealthy cotton planter. William Nichols, the architect who designed Greenwood, also designed Mississippi's Old Capitol Building and the Governor's Mansion. Union troops occupied the property during the Civil War and burned the plantation's cotton gin and a warehouse. Despite additions to the house, it retains most of its original design character. The Greenwood Plantation house was determined eligible for the National Register of Historic Places by the Mississippi Department of Archives and History.



Greenwood Plantation.

The driveway to the plantation crosses the parkway motor road corridor and connects with Old Agency Road. The driveway runs north-south and serves as the primary means of access to the property. It is recognized as a feature contributing to Greenwood Plantation's historical significance.

Archeological Resources

Archeological testing at the Choctaw Agency site by the National Park Service's Southeast Archeological Center in 1988 uncovered large quantities of early 19th century artifacts indicative of Choctaw and Euro-American interaction.

Another relevant archeological site is within the project area. Cultural material recovered there may be associated with the agency, indicating the possible location of slave cabins as well as the campsites of Old Natchez Trace travelers and visiting Choctaw.

Also within the project area, other archeological sites identified along Old Agency Road represent the likely locations of late 19th/early 20th century tenant houses. These sites have limited archeological and historical significance. Cultivation and construction has compromised their potential for information.

NATURAL RESOURCES

Air Quality

Madison County, Mississippi, is an attainment area for ozone as defined by national ambient air quality standards. The Mississippi state implementation plan is in conformance with the national standards; however, this project is not listed in the latest Mississippi implementation plan.

Carbon monoxide (CO) is the most prevalent vehicle emission; therefore, this study will address CO concentrations produced by vehicular operations on the Natchez Trace Parkway and intersecting roadways.

Geology and Soils

The gently rolling topography of the parkway motor road right-of-way in Ridgeland features up to 8% slopes. Soils within the corridor consist of Byram, Loring, and Providence silt loams, as shown on the map of soil types and prime and unique farmlands. Oaklimeter and Riedtown silt loams are found in the alluvium of the broad flood plains within the corridor (Natural Resource Conservation Service 1993). With the exception of Oaklimeter soils, none of the mapped soils appear on the Mississippi list of hydric soils. Riedtown silt loam may contain inclusions of hydric soils.

The silt loams on the gently rolling slopes have low strength for streets and roads because the subsoil and underlying clayey material shrink and swell with seasonal changes in moisture. Steeper slopes, which range from 5% to 8%, present more severe limitations, including increased surface erosion. The silt loams in floodplain areas also have low strength for roads and streets because of seasonal wetness and occasional flooding. Appropriate design and careful construction can mitigate these limitations.

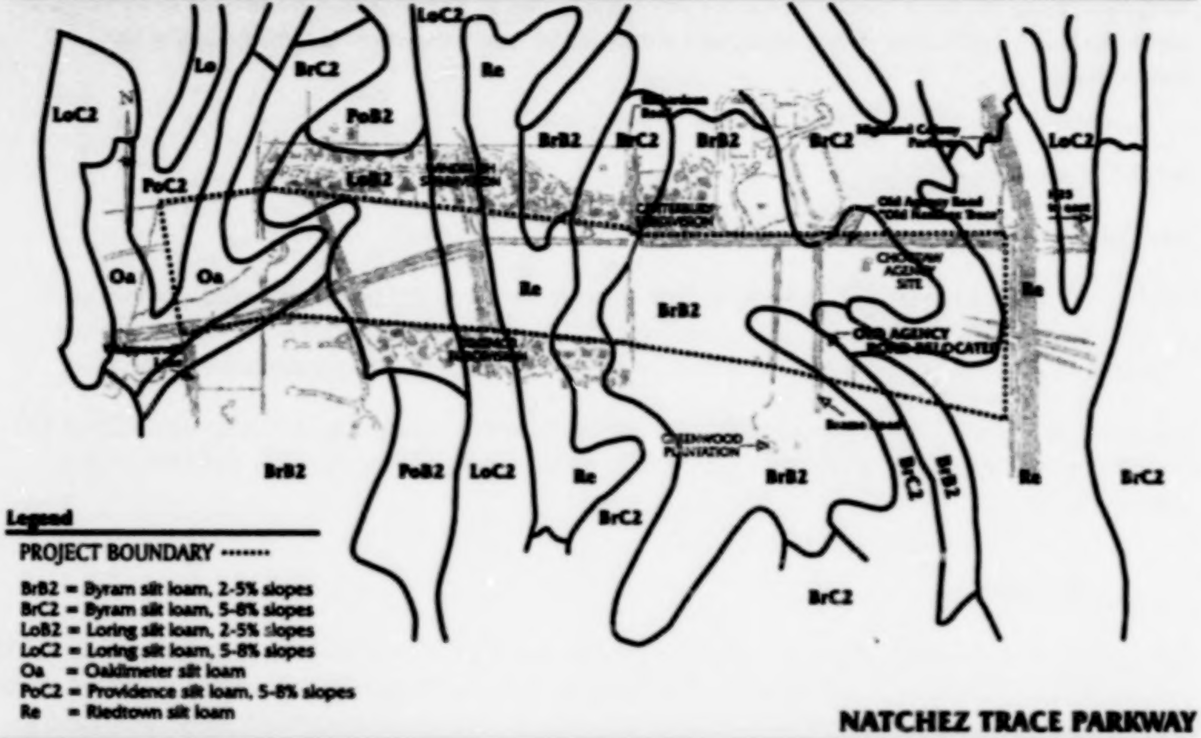
Prime and Unique Farmlands

There are no prime or unique farmlands within the parkway motor road corridor in Ridgeland.

Water Resources

Water Quality. Small, unnamed tributaries of White Oak Creek and Purple Creek are located throughout the project area. Streams in the project area east of St. Andrew's School are tributaries of Purple Creek; the remaining streams drain to White Oak Creek (NPS 1999). White Oak Creek flows southward into the Pearl River (NPS 1978). The riverine wetland areas (wetlands 5, 8, and 9) described in the following section contain open water corridors or streams. Many of the palustrine forested wetlands are also located close to streams.

SOIL TYPES / PRIME AND UNIQUE FARMLANDS


LoC2
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Oa
Oa
Re
BrB2
Re
BrB2
PoB2
LoC2
Re
BrC2
GREENWOOD PLANTATION
BrB2
BrC2
BrB2
Re
BrC2
BrC2
Legend
PROJECT BOUNDARY
BrB2 = Byram silt loam, 2-5% slopes
BrC2 = Byram silt loam, 5-8% slopes
LoB2 = Loring silt loam, 2-5% slopes
LoC2 = Loring silt loam, 5-8% slopes
Oa = Oaklimeter silt loam
PoC2 = Providence silt loam, 5-8% slopes
Re = Riedtown silt loam

NATCHEZ TRACE PARKWAY

SOURCE: Soil Survey of Madison County, MS

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The streams within the parkway motor road corridor must meet state water quality standards that include minimum conditions applicable to all state waters and specific uses such as fishing, the propagation of fish and aquatic life, and wildlife (Mississippi Department of Environmental Quality 1995). General standards and conditions outlined for streams, such as those found within the project area, include the following:

- Waters shall be free from substances attributable to municipal, industrial, agricultural, or other discharges.
- Waters shall be free from floating debris, oil, scum, and other materials attributable to municipal, agricultural, or other discharges.
- Waters shall be free from substances in concentrations or combinations that are toxic or harmful to humans, animals, or aquatic life.

Specific conditions and levels for parameters such as dissolved oxygen, pH, temperature, bacteria, specific conductance, dissolved solids, taste and odor, phenolic compounds, and toxic substances are outlined in the state standards.

Floodplains. The 100-year floodplains of White Oak Creek and Purple Creek border the western and eastern ends of the project area, respectively. A small portion of the 100-year Purple Creek floodplain extends into the project area along Highland Colony Parkway.

Wetlands. Surveys for wetlands in the project area were performed in March 1999 (NPS 1999). The wetland survey information included soil properties, wetland indicator vegetation, and hydrologic conditions. Previously published information was also reviewed to determine the approximate extent of wetlands on and adjacent to the project area. The secondary source data included the U.S. Fish and Wildlife Service's national wetland inventory maps, Madison County soil maps, preliminary design plans prepared by the Federal Highway Administration, and biological surveys for section 3P of the Natchez Trace Parkway.

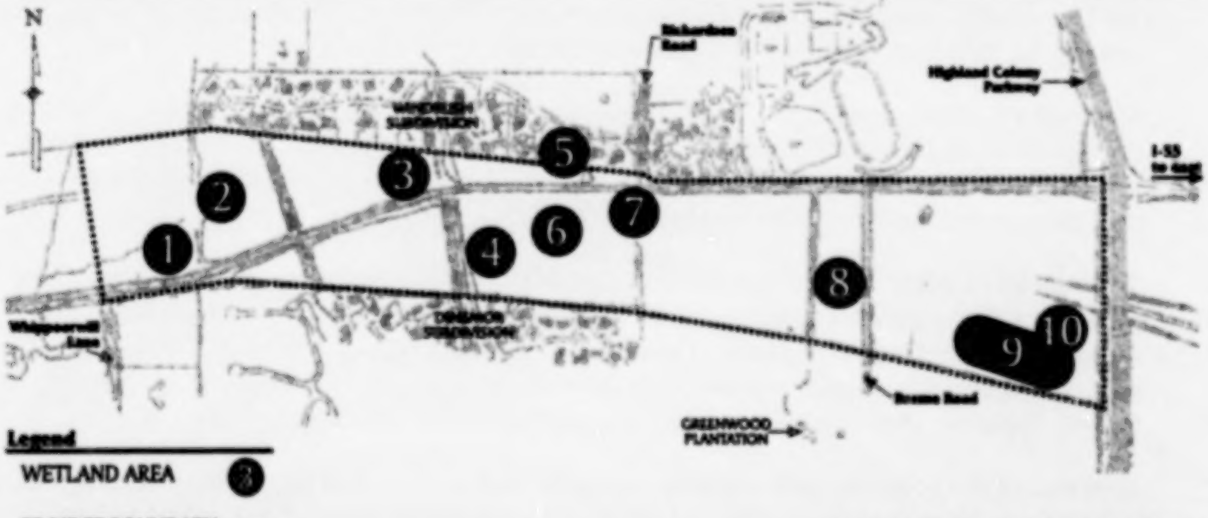
Wetlands identified in the project area exhibit the characteristics of jurisdictional wetlands as defined under section 404 of the Clean Water Act and the ecological conditions that correspond to the wetland classification system in the Cowardin classification of wetlands and deepwater habitat (USFWS 1979).

The outermost boundary of each wetland within the project area was demarcated with orange flagging and numbered consecutively. Fourteen wetland/upland boundary lines were established. A total of 4.25 hectares (10.5 ac.) of wetlands were surveyed in 10 different areas. For purposes of mapping wetland locations and calculating impacts, wetlands were numbered 1 through 10. The approximate locations of these wetlands are described below.

Several wetland communities (palustrine and riverine) are contained within each wetland area. Palustrine wetlands are wet vegetated areas dominated by trees, shrubs, and persistent emergents that include areas such as bogs, marshes, swamps, and ponds. Riverine wetlands are those usually contained within or along a stream channel, and in the project area they are generally bounded by wetlands dominated by the palustrine vegetation mentioned above.

Wetland 1 is a palustrine forested saturated wetland just east of Whippoorwill Lane in the southern portion of the project area. This wetland type contains a canopy dominated by mature water oak, American elm, green ash, and sweet gum. Canopy saplings, sugarberry saplings, winged elm,

WETLANDS



NATCHEZ TRACE PARKWAY

SOURCE: March 1999 Field Review published in "Wetland Delineation Report for Natchez Trace Parkway" (April 7, 1999); US Fish and Wildlife Service National Wetland Inventory quadrangle maps; USDA Soil Conservation Service soil maps of Madison County, MS; Preliminary design maps by Federal Highway Administration; and "Biological Surveys for Section 3P Natchez Trace Parkway."

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poison ivy and elderberry are present in the understory. The ground cover is dominated by Japanese honeysuckle, spring cress, and sedges. The total land area of this wetland is approximately 0.67 hectares (1.65 ac.). Approximately 80% of this acreage is within the project area; the remaining 20% extends beyond the area to the west.

Wetland 2 is adjacent to wetland 1. It consists of a palustrine permanently flooded, open water pond with a palustrine scrub/shrub saturated wetland fringe. Dominant scrub/shrub vegetation includes sweetgum saplings, winged elm, Japanese honeysuckle, and groundsel tree. The open water pond is 0.042 hectare (0.10 acre), and the scrub vegetation covers 0.11 hectare (0.28 ac.). The total area of wetland 2 is estimated at 0.15 hectare (0.38 ac.).

Wetland 3 is another palustrine scrub/shrub saturated wetland north of Old Agency Road in the vicinity of the Windrush subdivision. This wetland has similar characteristics and vegetation to wetland 2. This wetland is roughly 0.07 hectare (0.18 ac.).

Wetland 4 is a palustrine forested saturated wetland adjacent to wetland 3 in a north-south orientation across the project area perpendicular to the proposed alignment. The canopy is dominated by water oak, American elm, green ash, and sweet gum. This wetland covers 0.30 hectare (0.73 ac.).

Wetland 5 consists of a series of riverine ditches north and south of Old Agency Road between wetland 3 and Richardson Road. These are open water corridors with little or no vegetation. This wetland occupies roughly 0.29 hectare (0.73 ac.).

Wetland 6 is a palustrine forested saturated wetland that is seasonally flooded with a wide palustrine scrub/shrub saturated wetland fringe. It is connected to wetland 4 at the southern boundary of the project area. The two areas form a U-shape beginning near the entrance to the Dinsmor subdivision along Old Agency Road, extending south to the project boundary, and north again to Old Agency Road west of Richardson Road. The land area of wetland 6 is 0.85 hectare (2.10 ac.).

Wetland 7 is a palustrine forested saturated wetland in the southwest corner of Richardson Road and Old Agency Road. The tree canopy is dominated by water oak, American elm, green ash, and sweet gum. This wetland covers 0.14 hectare (0.35 ac.).

Wetland 8 is a long, linear palustrine-forested saturated, seasonally flooded, riverine wetland that extends from the center of the project area near the Greenwood Plantation driveway to the southwest corner of Brame Road. The forested area is 0.4 hectare (0.98 ac.) and the riverine area is 0.02 hectare (0.05 ac.), for a total coverage of 0.42 hectare (1.03 ac.).

Wetland 9 is a linear wetland system comprised of palustrine forested saturated wetlands, palustrine permanently flooded open water ponds, palustrine scrub/shrub saturated wetlands, and palustrine emergent saturated wetlands. The emergent wetlands include vegetation such as rush, sedges, seedbox, panic grass, and buttercup. This wetland extends from Brame Road to Highland Colony Parkway. This wetland system occupies an estimated 1.31 hectares (3.24 ac.).

Wetland 10 is a small isolated palustrine emergent saturated wetland just north of wetland 9 and includes species such as rush, sedges, seedbox, and panic grass. This wetland is 0.04 hectare (0.11 ac.).

Except for wetland 10, the wetlands west of Richardson Road are associated with unnamed tributaries of White Oak Creek. The wetlands east of Richardson Road drain to Purple Creek.

Wetlands within the project area provide the functions of flood storage, groundwater recharge, and groundwater discharge. The diversity of wetland and upland habitats provides habitat to a variety of wildlife species. Those wetlands delineated downstream of development and close to agricultural areas retain and remove pollutants and nutrients, thereby improving surface and groundwater quality.

Wildlife

During 1993 field reviews conducted for an environmental assessment for the extension of several water utilities across the national parkway, wildlife species identified in table 4 were found to occur. None of these species is listed by the state of Mississippi or the U.S. Fish and Wildlife Service as endangered, threatened, or of special concern. Table 4 lists common species; it is not an exhaustive listing of all species occurring, or likely to occur, within the project area.

TABLE 4: WILDLIFE SPECIES WITHIN THE MOTOR ROAD CORRIDOR, NATCHEZ TRACE PARKWAY

Type / Common Name	Scientific Name	Type / Common Name	Scientific Name
Mammals		**Birds**	
White-tailed deer	*Odocoileus virginianus*	American goldfinch	*Carduelis tristis*
Opossum	*Didelphis virginiana*	Northern mockingbird	*Mimus polyglottos*
Eastern mole	*Scalopus aquaticus*	Indigo bunting	*Passerina cyanea*
Southern short-tailed shrew	*Blarina carolinensis*	American crow	*Corvus brachyrhynchos*
Least shrew	*Cryptotis parva*	Eastern meadowlark	*Sturnella magna*
Big brown bat	*Eptesicus fuscus*	Brown-headed cowbird	*Molothrus ater*
Eastern red bat	*Lasiurus borealis*	Blue-gray gnatcatcher	*Polioptila caerulea*
Nine-banded armadillo	*Dasypus novemcinctus*	Common yellowthroat	*Geothlypis trichas*
Eastern cottontail	*Sylvilagus floridanus*	Wood thrush	*Hylocichla mustlina*
Eastern chipmunk	*Tamias striatus*	Tufted titmouse	*Parus bicolor*
Eastern gray squirrel	*Sciurus carolinensis*	American robin	*Turdus migratorius*
Southern flying squirrel	*Glaucomys volans*	Blue jay	*Cyanocitta cristata*
Eastern harvest mouse	*Reithrodontomys humulis*	Hairy woodpecker	*Dendrocopos villosus*
White-footed mouse	*Peromyscus leucopus*	Carolina chickadee	*Parus carolinensis*
Golden mouse	*Ochrotomys nuttalli*	Rufous-sided towhee	*Pipilo erythrophthalmus*
Woodland vole	*Microtus pinetorum*	Ruby-crowned kinglet	*Regulus calendula*
Hispid cotton rat	*Sigmodon hispidus*	Northern cardinal	*Cardinalis cardinalis*
Red fox	*Vulpes vulpes*	Carolina wren	*Thryothorus ludovicianus*
Raccoon	*Procyon lotor*	Brown thrasher	*Toxostoma rufum*
Eastern spotted skunk	*Spilogale putorius*	White-throated sparrow	*Zontrichia albicollis*

Source: Mammals — Choate, Jones, and Jones 1994; Wolfe 1971; birds — Hays 1999.

Vegetation

Four types of upland communities were identified within the parkway motor road corridor (NPS 1999): mixed-hardwood forest, pine/oak forest, late successional fields, and agricultural fields. Each of these vegetation types is common in the Jackson area. While portions of each community could be lost within the project area, the impact would be negligible in the local/regional context.

Mixed-hardwood forest communities are adjacent to the palustrine forested wetlands in the western parkway motor road corridor. The canopy is dominated by water oak, with lesser amounts of Shumard oak, cherrybark oak, and black cherry. Canopy saplings, flowering dogwood, and blackberry are representative understory species. Poison ivy, Japanese honeysuckle, common blue violet, and spring beauty are common in the groundcover layer. Several mature oak trees (150+ years old) grow in the center of the project area east of Dinsmor Crossing (wetland 6).

Pine/oak forest is in the central portion of the parkway motor road corridor to the west of Brame Road. Mature loblolly pine dominates the canopy. Shumard oak and water oak are infrequent in the canopy. Black cherry and water oak saplings and possumhaw typify the understory layer. Japanese honeysuckle is widespread throughout the groundcover layer.

Late successional fields are generally encountered in the central part of the parkway corridor. Sweet gum and loblolly pine saplings, eastern red cedar, winged elm, blackberry, wax myrtle, groundsel tree, goldenrod, Japanese honeysuckle, and little bluestem are common associates.

Agricultural fields are restricted to the east end of the parkway motor road corridor. The land to the east was used as pasture. A variety of grasses, false garlic, cranesbill, white clover, and Quaker lady bluets colonize the agricultural fields.

Threatened or Endangered Species, and Species of Special Concern

No federally listed threatened or endangered wildlife or plant species or their habitats were found in the project area during field surveys conducted by the U.S. Fish and Wildlife Service in July 1999 (see appendix B). Table 5 lists state-protected wildlife species occurring within Madison County. Each species is listed followed by its status and the likelihood that its required habitat may occur in the project area. The likelihood that a species would occur was determined by consulting several

TABLE 5: STATE-LISTED SPECIES WITH POTENTIAL FOR OCCURRENCE IN MADISON COUNTY, MISSISSIPPI

Common Name	Scientific Name	State Status	Federal Status	Description
Four-toed salamander	*Hemidactylium scutatum*	S	-	Occurrence unlikely
Webster's salamander	*Plethodon websteri*	S	-	Habitat not supported
Black-crowned night heron	*Nycticorax nycticorax*	S	-	Occurrence unlikely
Cooper's hawk	*Accipiter cooperi*	S	-	Parkway motor road not a threat to significant decline of this species
American kestrel	*Falco sparveritus*	S	-	None sighted but likely present
Loggerhead shrike	*Lanius ludovicianus*	S	-	Year-round resident — population augmented by migration each winter
Black vulture	*Coragyps atratus*	S	-	May feed along the parkway motor road
Turkey vulture	*Cathartes aura*	S	-	May feed along the parkway motor road
Osprey	*Pandion haliaetus*	S	-	Habitat not supported
Red-shouldered hawk	*Buteo lineatus*	S	-	Parkway motor road not a threat to significant decline of this species
Steelcolor shiner	*Notropis whipplei*	S	-	Habitat not supported
Common barn owl	*Tyto alba*	S	-	Should remain stable following construction
Western sand darter	*Ammocrypia clara*	S	-	Unlikely to occur
Hoary bat	*Lasiurus cinereus*	S	-	Occurs as a migrant
Mississippi map turtle	*Graptemys kohnii*	S	-	Habitat not supported
Cliff swallow	*Hirundo pyrrhonata*	S	-	Present only at large bridges
Bewick's wren	*Thryomanes bewickii*	S	-	None sighted — habitat suitable
Rock pocketbook	*Arcidens confragosus*	S	-	Habitat not supported for all of these mussels along the proposed parkway motor road extension right-of-way
White heelsplitter	*Lasmigona complanata*	S	-	
Alabama hickorynut	*Obovaria unicolor*	S	-	
Pyramid pigtoe	*Pleurobema pyramidatum*	S	-	
Inflated heelsplitter	*Potamilus inflatus*	S	T	
Rabbitsfoot	*Quadrula cylindrica*	S	E	
Wartyback	*Quadrula nodulata*	S	-	
Fawnsfoot	*Truncilla donaciformis*	S	-	
Deertoe	*Truncilla truncata*	S	-	
Mole kingsnake	*Lampropeltis calligaster rhombomaculata*	S	-	Protection needed, but no special management technique required to ensure survival

Note: E = Endangered Species; S = Mississippi State Species of Special Concern; T = Threatened Species written sources including biological surveys for Natchez Trace Parkway section 3P (NPS 1991), the Mississippi Natural Heritage Program database, and the U.S. Fish and Wildlife Service database for Madison County, Mississippi. No state or federally listed plant species of special concern occur within the project area. Appendix A provides a listing of state plant species of special concern.

SOCIOECONOMIC ENVIRONMENT

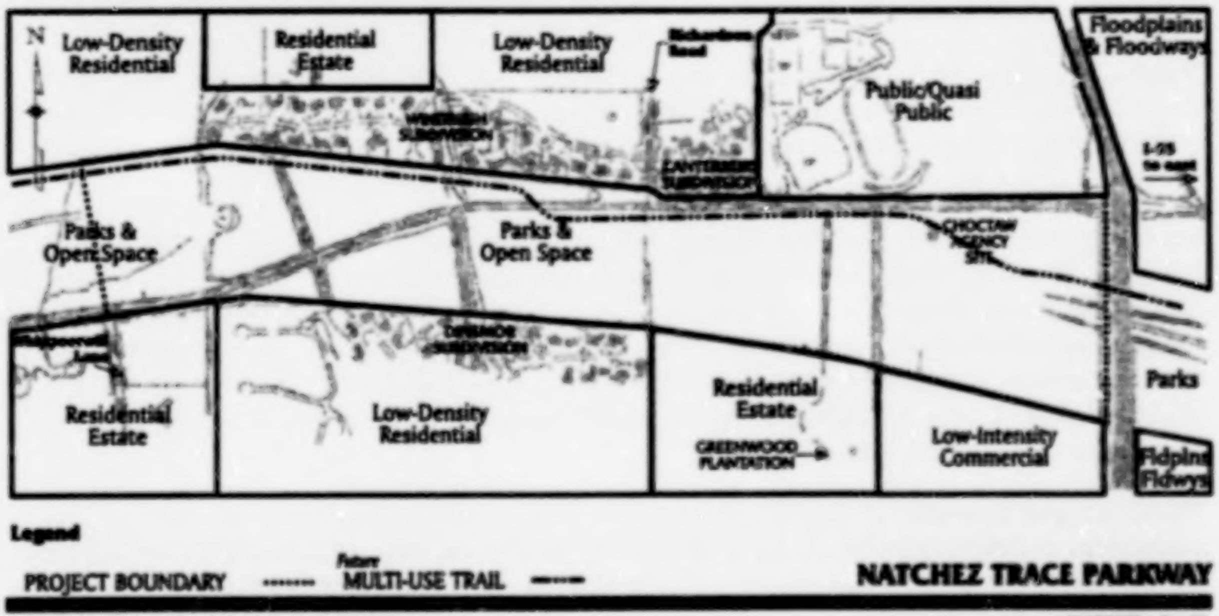
Land Use

Local Comprehensive Plans. In the *Year 2020 Comprehensive Plan for the City of Ridgeland, Mississippi,* the primary land uses shown adjacent to the parkway motor road corridor include public/quasi public, low-density residential, and residential estate. The public/quasi public designation includes St. Andrew's School and other uses such as churches, government buildings and facilities, and cemeteries. Low-density residential includes the Windrush, Dinsmor, and Canterbury subdivisions. Residential estate designations are primarily single-family detached residences on 1-acre sites, and the use is intended to promote the development of large-lot residential estates. These areas, which are north, southwest, and southeast of the parkway motor road corridor, may or may not be served by the municipal sewer system within the next 25 years. (See Land Use Plan, Ridgeland, Mississippi.)

The *Comprehensive Plan* shows the Natchez Trace Parkway extending from I-55 west to the vicinity of Whippoorwill Lane and beyond to the Madison County line. It also shows the existing Old Agency Road as a collector road north of the proposed parkway motor road. Highland Colony Parkway is shown as a major arterial. Old Agency Road Relocated is shown as a proposed collector road along the southern edge of the parkway motor road corridor between Brame Road and Whippoorwill Lane.

Adopted Transportation Plans. *The Jackson Urbanized Area's Transportation Plan for the Year 2020* (Central Mississippi Planning and Development District 1997) identifies the development of the

LAND USE PLAN, RIDGELAND, MISSISSIPPI



SOURCE: 1999 Land Use Plan, Ridgeland, Mississippi

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Natchez Trace Parkway through the project area. This segment of the parkway between the Hinds County line and I-55 is identified as a stage II (2001–2010) improvement.

The *Transportation Plan Update for the City of Ridgeland* (Ridgeland, MS 1996) identifies the relocation of Old Agency Road as a mid-term recommended improvement over the next 5 to 10 years (section 4.7, item 11, and table 5.41).

Planned Developments. According to the Ridgeland Zoning Administration and Building Inspection Department (1999), developments planned for the vicinity of the Natchez Trace Parkway corridor include the following:

- A planned unit residential development located at Brame Road and Highland Colony Parkway (approximately 1.6 hectares / 4 acres) is being evaluated. No permit application has been filed. Developers are reviewing the site. This development would be approximately 1.25 kilometers (0.75 mi.) south of the parkway.
- A 130-unit elderly care center is planned for a site close to the entrance of the Dinsmor subdivision. The project is already permitted and ready for construction.

Visual Resources

The visual character of the Natchez Trace Parkway corridor is defined by gently rolling topography with a mix of densely wooded areas and open fields. The most striking visual features are dense woods and the overhead tree canopy. Both the wooded areas and the open fields have an intimate scale and a pristine visual character.

Visual Environment

Within the wooded areas, views are primarily foreground views defined by the dense woods, tree canopy, and the gently rolling topography (see photos 1 and 2). The wooded areas and tree canopy are primarily hardwood and mixed pine/oak forests. In addition, the woods include a dense understory that restricts the range and length of views.

Views across open cleared fields and thinned wooded areas provide middleground and sometimes distant views to visual features beyond the parkway corridor. The openness of the sunlit open fields provides strong visual contrast to the darkly shadowed and confined character of the wooded areas (see photos 3 and 4).

Man-made visual features, including residences, driveways, walls, and fences, are visually apparent, but do not dominate views, nor do they affect the overall visual character of wooded areas because of the density and mix of the trees, the towering vertical scale of the tree canopy, the gently rolling topography, and low shrubs that restrict the extent of the viewshed (see photo 5). Within or adjacent to the open fields or where the woods have been thinned, man-made features have become more visible because of the greater extent of the viewshed, the lack of eye-level screening, and the dominance of the tree canopy.

The office park development along Highland Colony Parkway has a different visual character and scale because of the size of the developments and because much of the vegetation has been cleared. This is major contrast with developments along the parkway corridor where much of the existing vegetation has been preserved.

Photo 1. Foreground views are defined by dense woods.

Photo 2. Trees and shrubs restrict the range of views.

Photo 3. Open, cleared areas provide visual contrast.

Photo 4. Cleared areas provide a middle ground for views.

Visual Experience

The visual character of the parkway corridor is experienced primarily from Old Agency Road and other local roads, including Richardson Road, Brame Road, the Greenwood Plantation driveway, Whippoorwill Lane, and Dinsmor Crossing. Each is a narrow two-lane road, with overarching tree canopies that permit drivers and passengers to intimately experience the character and scale of the area without seeming to intrude, even though the experience is from a moving vehicle (see photo 6).

Visible historic and cultural sites that add visual quality, diversity, and interest include the Choctaw Agency site and Greenwood Plantation (see photos 7 and 8).

Visual Sensitivity

There is a direct relationship between the visual variety of the corridor and the visitor's positive experience of it. Historic and cultural sites are also important attractions. They encourage the travelers to view and experience the attractions and to gain pleasure from that experience. When traffic is heavy on Old Agency Road, however, the views and enjoyment are significantly reduced, and concerns about safety become paramount.

Frequent travelers in the corridor who regularly view and experience it become aware of both the large-scale visual features (dense woods, overhead canopy, open fields) and the small-scale visual elements that provide opportunities of interest and importance (individual trees, glimpses through the woods, a historic site). Sensitivity to the small-scale visual elements is a result of greater knowledge and familiarity due to increased viewing opportunities. Less frequent viewers will experience primarily the large-scale visual features because they are so striking and noticeable.

Residents of the area enjoy the scenery and visual environment, and they appreciate the role it plays in the quality of their lives. Many are concerned about protecting historic and cultural values. Residents generally have a high level of sensitivity to the importance of the visual environment.

Local Residents

Three recently developed upscale single-family residential communities abut portions of the parkway corridor. These include the Canterbury and Windrush subdivisions on the north at Richardson Road and the Dinsmor subdivision on the south. These are master planned communities with family amenities and distinctive homes. Each community has been developed within the last 20 years. Similar residential communities have been and are being developed farther north.

In addition, at the western end of the parkway corridor are some older, smaller single-family residences along Whippoorwill Lane and Mockingbird Lane. These were some of the original residences in the area.

Residents here have chosen to live in this outlying area because it is remote from the central urban core, yet it has convenient regional accessibility (primarily I-55 via Old Agency Road).

Photo 5. Man-made features in wooded areas are less visible.

Photo 6. Trees along Old Agency Road provide a canopy and visual closure.

Photo 7. The Choctaw Agency site is visible from Old Agency Road.

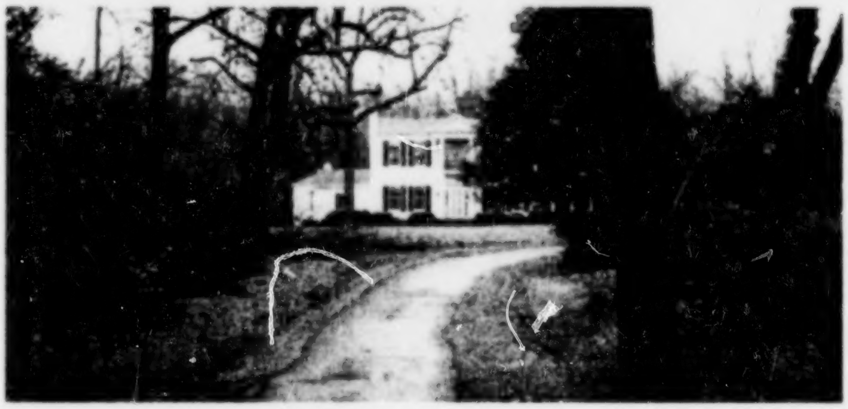

Photo 8. Greenwood Plantation.

In addition, specific quality of life features make these attractive communities. These include adjacent, similar, high-quality planned residential developments with similarly priced homes; a rural setting with mature vegetation that provides privacy and seclusion; access to the outdoors; and a high sense of security and safety. There are high-quality public and private schools in the immediate area (St. Andrew's School, Madison-Ridgeland Academy), and access is primarily by way of local streets with relatively low traffic volumes, particularly north of the parkway corridor. Direct access to regional centers and recreation attractions, including Natchez Trace Parkway and Ross Barnett Reservoir, provide additional benefits. These quality of life elements make this area a most desirable residential location, and the preservation of these elements is a concern of residents along Whippoorwill Lane and in the Windrush, Canterbury, and Dinsmor subdivisions.

Noise

Noise Defined. Noise may be defined as unwanted sound. Sound is the pressure vibration that the human ear can detect. The unit measurement of sound pressure levels used to describe loudness is a decibel (dB). Because the human ear does not have the sensitivity to detect low frequency noises, the A-weighted decibel scale (dB(A)) is calibrated to the human ear's response where zero is the threshold of hearing. Table 6 presents examples of noise levels common to everyday activities using the dB(A) scale. Also listed is the relative loudness that an average person would rate the sound sources, using a quiet urban daytime as a reference level. For the average human a 10 dB increase in the measured sound level is subjectively perceived as being twice as loud, and a 10 dB decrease is perceived as half as loud. The decibel change at which the average human will indicate that the sound is just perceptibly louder or perceptibly quieter is 3 dB.

Noise Ordinances. There are two sets of federal regulations for noise levels on federal highway projects: the original code (23 CFR 772) and the revised code, *Highway Traffic Noise Analysis and Abatement: Policy and Guidance* (HTNAA). In general, if a highway project receives federal funds, it must meet these regulations. The regulations at 23 CFR 772 provide procedures for noise studies, noise abatement measures and criteria, and requirements for distributing traffic noise information. The HTNAA document, a companion to 23 CFR 772, was released in June 1995 by the Federal Highway Administration to update and consolidate the previous regulations.

TABLE 6: QUALITATIVE DESCRIPTION OF TYPICALLY OCCURRING NOISE

Sound Level in dB(A)	Type of Noise	Relative Loudness of Different Noise Levels	Subjective Impression of Noise
110	Disco dance floor	128 times as loud	Uncomfortably Loud
90	Motorcycle at 25'	32 times as loud	Very Loud
85	D8 Cat Dozer at 50'		
80	Diesel truck, 40 mph at 50'	16 times as loud	Loud
75	Average car, 40 mph at 25'		
70	Vacuum cleaner at 3'	8 times as loud	
65	Conversation at 3'		
60	Background music	4 times as loud	
55	Air conditioning unit at 15'		
50	Quiet residential	Twice as loud	
45	Bird calls		Quiet
40	Lower limit urban daytime ambient	Reference loudness	
30	Background quiet suburban at night	1/2 as loud	
20	Quiet whisper	1/4 as loud	Barely Audible
0	Threshold of Hearing		

Source: Engineering Dynamics 1999.

The *Mississippi Highway Traffic Noise Policy* was approved by the Federal Highway Administration in November 1996, and its policies and procedures are consistent with federal regulations.

Ridgeland's noise control ordinance, section 910017, identifies noise limits of 55 dB(A) for daytime hours and 50 dB(A) for nighttime hours for agricultural and residential properties. No limits are identified that pertain to roadway traffic noise. Construction noise, including excavation, is exempt from the agricultural and residential property noise limits from 7 A.M. to 6 P.M. Monday through Saturday and 9 A.M. to 6 P.M. on Sunday.

Existing Background Noise Levels. The project area is relatively isolated and except for occasional overflights by helicopters and aircraft, vehicle traffic on Old Agency Road is the dominant noise source in the area. The area is typical of most suburban developments away from a city center.

In April 1999 noise level measurements of the existing background and traffic noise along Old Agency Road were performed within the corridor at three locations (see the Noise Conditions map):

> *Site 1* — 152.5 meters (500 ft) west of Old Agency Road and Dinsmor Crossing, at a distance of 30.5 meters (100 ft.) south of Old Agency Road.
>
> *Site 2* — At the intersection of Old Agency Road and Dinsmor Crossing, at a distance of 30.5 meters (100 ft.) north of Old Agency Road and 3 meters (10 ft.) south of the masonry wall along the eastside of the Windrush subdivision.
>
> *Site 3* — On Brame Road, at a distance of 305 meters (1,000 ft.) south of Old Agency Road.

For residences near Old Agency Road, daytime average noise levels can reach 60 dB(A), with nighttime levels in the low 40s. This is expected, given the proximity of the measurement locations to the road. At site 3 and for areas farther away from Old Agency Road, the noise environment is relatively quiet at 45 dB(A). Traffic noise is audible, but not dominant. Table 7 lists the measured ambient noise levels at these locations.

NOISE CONDITIONS

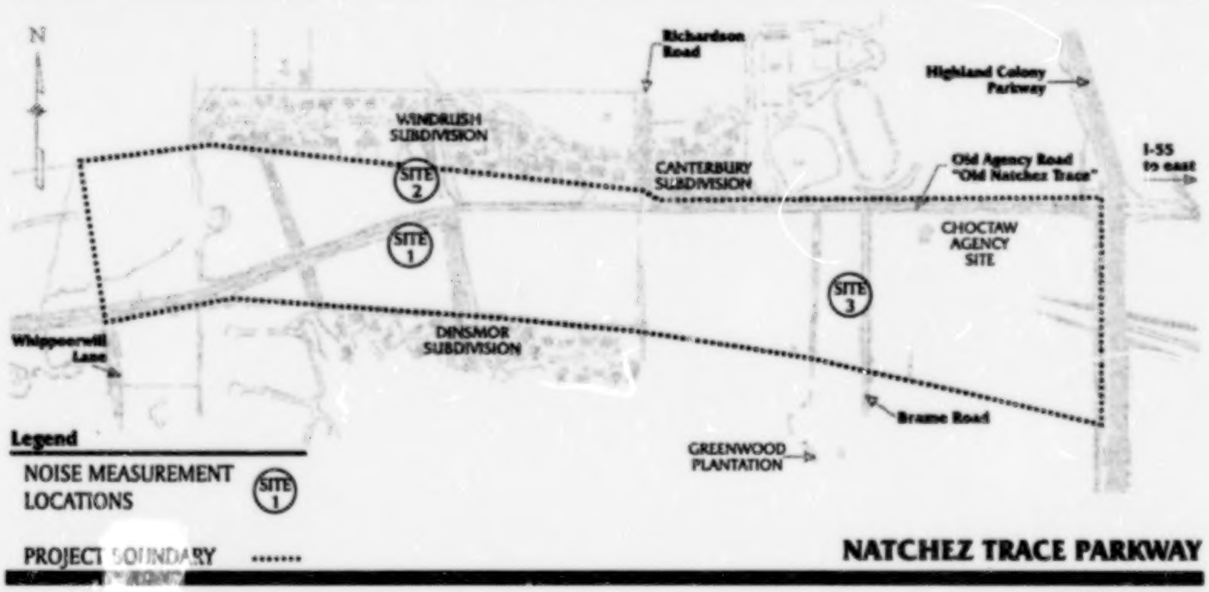

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TABLE 7: MEASURED AMBIENT NOISE LEVELS

Measurement Site	Type of Land Use	Distance from Noise Source	Measured Noise Level (Range Leq dB(A))
Location 1	Residential	30.5 m (100 ft.)	33 dB(A) (12:00 – 3:00 A.M.) – 50 dB(A) (8:00 A.M.)
Location 2	Residential	30.5 m (100 ft.)	40 dB(A) (1:00 – 5:00 P.M.) – 57 dB(A) (9:00 A.M.)
Location 3	Undeveloped	305 m (1,000 ft.)	40 dB(A) (1:00 A.M., 1:00 P.M.) – 45 dB(A) (4:00 A.M.)

Source: Engineering Dynamics, Inc., 1999.

Hazardous Materials

No hazardous materials surveys have been conducted, and no hazardous materials have been identified. However, some industries in the vicinity of the project area may transport hazardous materials through the project area on the road network.

ENVIRONMENTAL CONSEQUENCES

This chapter describes the impacts of implementing the alternatives. It begins with a description of methodologies and assumptions for each impact topic (or resource) outlined in the "Affected Environment." The analysis of impacts follows and is grouped first by alternative and second by impact topic. The analysis for each impact topic includes a description of the impacts related to a particular alternative, the duration and intensity of the impact, a review of applicable mitigation measures, an assessment of potential cumulative impacts, and a conclusion. Impact topics that were considered but were dismissed from further analysis are identified on page 75.

ASSUMPTIONS AND METHODOLOGIES FOR ANALYZING IMPACTS

Impact Analysis

As required by the National Environmental Policy Act, direct, indirect, and cumulative impacts are identified and characterized in the impact analysis for each alternative.

Impact Intensity and Duration

The NPS *Director's Order 12: NEPA Compliance Guideline* (1997) suggests an approach to identifying the intensity (or magnitude) and duration of impacts. Indicators of the intensity of an impact, whether it be negligible, minor, moderate, or major, are included in the impact analysis. Unless otherwise noted in the individual methodology sections (such as transportation and wetlands), impact intensities are defined as follows:

Negligible — The impact would not be measurable or perceptible.

Minor — The impact would be measurable or perceptible, but slight. The overall viability of the resource would not be affected. Left alone, the resource would recover, and the impact would be reversed.

Moderate — The impact would be sufficient to cause a change in the resource (e.g., abundance, distribution, quantity, or quality). The change would be measurable and perceptible but could be reversed.

Major — The impact would be substantial, highly noticeable; it could be permanent.

The planning horizon for this project was identified as approximately 15–20 years. Impacts that would occur during this timeframe were identified and classified as either short term or long term. In most cases, short term would be five years or less, and long term five years or more. Where duration is not noted in the impact analysis, it is assumed to be long term.

Impacts may also be adverse (negative) or beneficial (positive). Unless otherwise noted, impacts are considered adverse.

Mitigation

Mitigating actions are listed in the "Alternatives, Including the Proposed Action" chapter. All impacts have been assessed assuming that mitigating measures have already been completed. Some mitigating measures are reemphasized in the impact analysis.

Cumulative Actions and Cumulative Impacts

In the Council on Environmental Quality's "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR 1508.7), a cumulative impact is defined as the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Some past, present, and future projects in the Ridgeland area could affect recreational opportunities and traffic patterns. Current or proposed projects that need to be considered in the analysis of cumulative impacts include a multi-use trail that will extend through the parkway motor road right-of-way, state and local transportation plans, and parkway projects. The long-range transportation plans are discussed in the "Affected Environment" in the transportation and land use sections.

Multi-Use Trail

The September 1995 *Multi-Use Trail Study Environmental Assessment* evaluated four alternatives for the construction of a 33-kilometer (21 mi.), paved, multi-use trail through the parkway corridor from just south of the parkway's intersection with U.S. 20 to the West Florida Boundary interpretive wayside. The proposed trail identified in the 1996 "Finding of No Significant Impact" is the alternative selected to determine cumulative impacts. This trail would be designed to accommodate nonmotorized recreational uses, such as hiking and biking, and it would be designed to minimize conflicts between trail users and vehicular traffic on adjacent roadways. The trail would link to surrounding communities and would be accessible at all at-grade crossings. Six existing parking areas and four planned parking areas would provide access to the trail, as well as access to the parkway motor road. Within the project 3P13 project area the trail would be north of and parallel to the parkway motor road; it would follow the alignment of the historic trace along an approximately 700-foot segment of Old Agency Road (which would be closed to traffic and restored to historical appearances). The trail would connect to the Choctaw Agency parking area, one of the access points.

The trail would be 2.4 meters (8 ft.) wide, with an additional 0.6 meter (2 ft.) of clearing on each side. Trail bridges would be a minimum width of 3.1 meters (10 ft.). The trail would cross three drainages within the project area. West of the intersection of Old Agency and Richardson Roads, the trail would span two shallow drainages, the first on a trail bridge and the second over a pipe culvert. East of the Choctaw Agency site the trail would cross Highland Colony Parkway on a trail bridge before crossing Purple Creek on an extension of a box culvert. The average width of the initial construction zone is 20 feet, including an 8-foot trail and a 2-foot clearing on each side of the trail.

Mississippi Department of Transportation Projects

The Mississippi Department of Transportation will replace, widen, and lengthen the parkway bridge that spans I-55 east of the project area. A bicycle lane will be included as part of the project.

Other Natchez Trace Parkway Improvements in Section 3P

Project 3P14. This project includes parkway motor road bridges that are being constructed over Highland Colony Parkway (just east of project 3P13) and U.S. Highway 49.

Project 3P3. This project includes parkway grading and drainage work between Highland Colony Parkway and I-55, the realignment of the I-55 access connector, and rehabilitation of parkway paving between I-55 and the parkway access connector at U.S. 51.

Project 3P10. This project is the final surfacing and shoulder work on the entire 3P section of the parkway.

Project 3P11. This project consists of realigning Cynthia Road (southeast of the 3P13 project area), including the Cynthia Road bridge over the parkway.

Project 3P4. This project within the city of Clinton includes the realignment of a portion of West Northside Drive and Vernon Drive, and grading and providing drainage for the parkway between I-20 and U.S. 49, along with other roadways in Clinton.

Project 3P9. This project includes the construction of parkway bridges over the Kansas City Southern Railroad, West Northside Drive, Pinehaven Drive, Arrow Drive, Bogue Chitto Stream, and County Road "G" within the limits of the 3P4 project.

Project 3P13-West. A small section of 3P13 west of Whippoorwill Lane was not included in the project area for the current environmental impact statement because the parkway alignment would remain as proposed in the 1978 *Final Environmental Impact Statement*. The parkway motor road would be constructed through this section to adjoin with the partially completed (but not open) section of the parkway motor road to the west.

Methodologies

Transportation

Several local roads are within or cross the alignment of the parkway motor road. Changes to these roadways under different alternatives affect the access, volume, and safety of the transportation system. For each of these three impact topics, the following impact definitions are provided.

Access. Each alternative could restrict or eliminate access movements for certain areas. These changes could require drivers to travel out of their normal direction to access the main roads. Access impacts were evaluated by determining if vehicle movements would be restricted, if out-of-direction travel would be required, or if any detour would be inconvenient for each of the major access points by affecting travel time. The impacts are defined as follows:

Negligible — No change to permitted movements or direction of travel would occur.

Minor — Access movements would be restricted or the access location would change for only one or two local roads, while maintaining travel in all directions with minimal rerouting.

Moderate — A restriction in access movement or relocation of an access would occur that required a significant change in the travel route.

Major — The permitted turn movements would be reduced, and a direction of travel would be eliminated, requiring a significant change in travel route for one or more roads.

Where the change in access would improve existing conditions or where the change in travel route would create a shorter, more direct trip, the impacts would be considered positive or beneficial. If access was restricted and out-of-direction travel was required, the impact would be considered adverse. Both short- and long-term impacts to access could be experienced.

Volumes. Existing traffic volumes on Old Agency Road were provided for 1997 in the "Safety Study: Old Agency Road" (FHWA 1999). These volumes were used in conjunction with forecasted 2020 volumes at limited locations on Old Agency Road and the parkway motor road (Ridgeland 1996) to estimate future volumes for all road segments within the project area. For this study, the total future traffic volumes remain the same for each alternative, but volumes shift to different roads, depending on the configuration of the alternative.

Impacts to roadway volumes are considered long term. Where volumes would decrease, impacts are considered positive. Conversely, where volumes would increase, the impact would be negative. Since volumes on the parkway motor road would remain the same under all alternatives, only volumes on Old Agency Road and Old Agency Road Relocated were evaluated. The intensity of impacts are defined as follows:

Negligible — There would be no change in roadway volume over existing conditions.

Minor — Volumes would change by less than 10% for existing roads or volumes on new roads would be less than 3,000 vehicles per day.

Moderate — Volumes would change by 10% to 50% for existing roads, or volumes on new roads would be between 3,000 and 5,000 vehicles per day.

Major — Volumes would change by more than 50% on existing roads, or volumes on new roads would be over 5,000 vehicles per day.

Safety. Changes to the roadway system and the effects of those changes on emergency vehicle response times were conceptually evaluated. Geometric features such as intersection alignment, sight distance, and road cross-sections were evaluated. Ideally, roadways should intersect at right angles to provide maximum sight distance and maneuverability. Adequate sight distance should be provided in accordance with AASHTO standards to facilitate cross-street exiting and entering movements. Road cross-sections should provide adequate width for travel lanes and include a shoulder.

Emergency vehicle response times are a function of the directness of the route, the availability of alternative routes, and the design quality of available routes. Specifically, the presence of adequate shoulders gives yielding vehicles space to pull out of the way to let an emergency vehicle pass. This feature is especially important on two-lane roads, where inadequate shoulders can force emergency vehicles to use the oncoming traffic lane to go around yielding vehicles traveling in the same direction. The availability of alternative routes is important when another incident, traffic congestion, or construction activities limit mobility on the most direct route. The impacts for safety are defined as follows:

Negligible — No changes in sight distance, road alignment, or emergency vehicle response times would occur.

Minor — Changes in sight distance would occur at only a few intersections with no road alignment issues; emergency vehicle response times could change measurably for a few selected properties.

Moderate — Changes to sight distance or road alignment would occur at most intersections; emergency vehicle response times could change measurably for some properties.

Major — There would be significant changes to sight distance and road alignment at most intersections; emergency vehicle response times would change measurably for most properties.

Cultural Resources

All federal actions affecting cultural resources are subject to the provisions of the National Historic Preservation Act of 1966, as amended, and the National Environmental Policy Act, as amended. More specifically, sections 106 and 110 of the National Historic Preservation Act (in accordance with terms of the 1995 programmatic agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers) require federal agencies to perform the following:

Assess the impacts of their proposed actions on cultural resources included on, or eligible for inclusion on, the National Register of Historic Places.

Avoid or mitigate impacts on cultural resources affected by their proposed actions.

Allow other federal, state, and local organizations carrying out historic preservation planning activities, including Native American tribes and the interested public, the opportunity to comment on the proposed actions.

Accordingly, this document will be submitted to the Mississippi Department of Archives and History (the state historic preservation office), the Advisory Council on Historic Preservation, affiliated Native American tribes, and the interested public for review and comment.

The assessment of impacts on cultural resources followed a three-step process: (1) determining the area of potential effect of the proposed actions; (2) identifying the cultural resources within the area of potential effect that are either listed on or eligible for listing on the National Register of Historic Places (see the "Cultural Resources" section in the "Affected Environment" chapter); and (3) assessing the extent and type of impacts the proposed actions might have on cultural resources. An impact on cultural resources occurs if an action would have the potential to alter in any way the characteristics that qualify the resource for inclusion on the national register. If a proposed action diminished the integrity of such characteristics, it is considered to have an adverse effect. Impacts that might occur later than or at a distance from the location of a proposed action would also be potential impacts of the action and would be indirect effects.

Natural Resources

Air Quality. The methodology used to determine impacts to air quality is consistent with 40 CFR 93, in accordance with the Clean Air Act, as amended. Impacts to air quality were determined based on carbon monoxide (CO) concentrations produced by vehicular operations. Carbon monoxide was used because it is the most prevalent vehicle emission. In order to assess potential impacts, CO concentrations for existing conditions and each alternative in 2003 (the first year of operation) and 2020 (the design year) were evaluated.

The project alternatives were subjected to a graphical computer screening test (CO Screen), which makes various conservative, worst-case assumptions about meteorological conditions, traffic, and site conditions. The evaluations were made based on peak-hour traffic volumes on Old Agency Road, which is anticipated to carry the highest volume of traffic during the peak period within the project area. If the project alternative passed the screening test, the assumption was made that the project would not violate the national ambient air quality standards for carbon monoxide, as defined by the Environmental Protection Agency.

Soils. The construction of the parkway motor road and Old Agency Road Relocated would involve the clearing of natural and non-urbanized landscapes for a two-lane parkway. Parkway construction would require soil to be removed, back-filled, replaced, or otherwise altered.

To determine impacts the locations of soils in Madison County were mapped and identified from Soil Conservation Service soil surveys and onsite surveys in each proposed alternative corridor. General soil impacts were determined for each alternative by using the maps and surveys. The amount of vegetation that would be removed was also identified because it is indicative of the amount of surface soil that would be impacted.

Water Quality and Floodplains. The location of water resources and associated floodplains were mapped and identified from USGS topographical maps and Federal Emergency Management Agency (FEMA) maps obtained from Mississippi. The location of new or restored road development in the vicinity of each creek was identified. Mitigation measures were identified to ensure that impacts to local streams would be negligible.

Wetlands. Impacts to wetlands were determined by overlaying conceptual design drawings of each alternative on base maps that delineated and classified wetlands within the project area. Wetland locations were delineated and described in a wetland delineation report produced for the project area (NPS 1997). Maps produced for this study served as the wetland base maps.

In locations where roads were removed, constructed, or modified, permanent impacts to wetlands were calculated by the Federal Highway Administration, Eastern Federal Lands Highway Division, and expressed in square feet; these estimates were later converted to hectares and acres. The road widths used to determine wetland impacts (including the road surface, shoulders, and additional clearing required for construction) were similar to those identified under vegetation. However, in wetland areas clearing beyond the road shoulders would be minimal; therefore, actual road widths or the area between the limits of construction would be less. Reduced clearing areas were considered in determining wetland impacts.

The intensity of the resulting impacts on wetlands were determined based on the wetland acreage permanently filled (or restored) and the size, integrity, and connectivity of the wetland impacted.

Size — The severity of a loss of wetland acreage depends on the size of the wetland impacted. A small area of impact in a large wetland would be likely to have less of an effect than would a large area of impact in a small wetland. The change in size of a wetland, as a result of an impact, would also influence the integrity and connectivity of the wetland and vice versa.

Integrity — Highly intact wetland areas with little prior disturbance would be more susceptible to impacts from direct development than would a wetland area previously degraded by development or other activities. The loss of function and productivity of the higher quality wetland would be a

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greater loss than that of a lower quality wetland. Additionally, indirect impacts due to human trampling or a change in vegetation or hydrology would also impact the integrity of a wetland.

Connectivity — The relationship of wetlands to other wetlands and other valuable natural resources is also important in determining the degree of impact. Plant communities that are isolated from each other are less productive and functional than those that are connected. Narrow, pervious trail corridors that are infrequently or seasonally used would have less fragmenting effect than would a wide hard-surface roadway with high volumes of vehicular or pedestrian traffic. Buildings and other structures also provide barriers to the natural dispersal of plants and animals.

The following definitions of impact intensity are similar to those identified in other natural resource sections, but have been modified slightly to include the effects of size, integrity, and connectivity.

Negligible — No measurable or perceptible changes in wetland size, integrity, or continuity would occur.

Minor — The impact would be measurable or perceptible, but slight. A small change in size, integrity, or connectivity of the wetland could occur. However, the overall viability of the resource would not be affected. Left alone, the wetland would recover, and the impact would be reversed.

Moderate — The impact would be sufficient to cause a measurable change in one of the three parameters (size, integrity, or connectivity of the wetland) or would result in a small, but permanent, loss or gain in wetland acreage.

Major — The impact would result in a measurable change in all three parameters (size, integrity, or connectivity) or a permanent loss or gain of large wetland areas. The impact would be substantial and highly noticeable.

These intensities may describe either adverse or beneficial effects. Adverse impacts would result from the permanent filling or clearing of wetlands; beneficial impacts from the removal of obstructions such as roads or structures that often fragment wetland systems.

Vegetation. Impacts on vegetation were completed in three steps. Vegetative communities were surveyed, they were categorized, and rough boundaries of their occurrence were mapped for each alternative. Based on the data and maps, the extent and location of impacts on vegetation were determined for each alternative, and the impacts were characterized according to the amount of each vegetation type that might be removed during construction and the effect of that removal on the surrounding natural environment.

The following road widths (including the road surface, shoulders, and the additional area needed for construction) were used for each alternative to determine the impact from construction:

parkway motor road — 30.5 meters (100 ft.)

Old Agency Road Relocated — 30.5 meters (100 ft.)

other new roads — 30.5 meters (100 ft.)

restoration of Old Agency Road — 19.8 meters (65 ft.)

restoration of other roadways — 7.6 meters (25 ft.)

Because all alternatives are conceptual at this point, these widths could vary when the selected alternative was designed and construction drawings were prepared.

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Threatened or Endangered Species, or Species of Special Concern. Several written sources were consulted in order to determine the presence of threatened or endangered species, and species of special concern (both animal and plant species) within the parkway right-of-way. The written sources reviewed include the "Biological Surveys for Section 3P Natchez Trace Parkway" (Mississippi Department of Wildlife, Fisheries and Parks 1991), the Mississippi Natural Heritage Program database, the USFWS database for Madison County, Mississippi, and the "Wetland Delineation Report" for the Natchez Trace Parkway (NPS 1999).

Impacts to threatened or endangered wildlife species were directly related to vegetation impacts. Vegetation impacts would result in the disturbance or loss of habitat for these species potentially occurring within the project area. It was assumed that the greater the impact to vegetation in a habitat where a species could occur, the greater the impact to that species. Short-term impacts were not necessarily vegetation-related, but could result from disturbance due to noise and other construction and human activity within the project area.

Socioeconomic Environment

Land Use. Comprehensive plans and long-range transportation plans were collected and reviewed for the city and region in which project 3P13 is located. Relevant information included future land use plans, future roadway improvement or construction projects, and planned development activities. Telephone interviews were also conducted with planners from the city of Jackson, the city of Ridgeland, and Madison County.

Visual Resources. The basic elements that constitute the most desirable visual features were defined based on public comments and an evaluation of the site. These basic elements include the dense woods and overhead tree canopy, the intimate scale and contrast of the intermingled open fields, and the minimal intrusion of large-scale, urban, man-made elements in the visual character of the area, as viewed from adjacent residential subdivisions and by users of the Natchez Trace Parkway.

The intensity of visual impacts to woods and overhead tree canopy were measured wherever mixed-hardwood and pine/oak forest would be permanently lost. Similarly, open field impacts were measured wherever late successional and agricultural fields would be permanently lost. Any loss of forest and open fields would be an irretrievable impact. In some instances, however, the location of the impact might also be an important consideration in the definition of its intensity.

The intensity of the visual intrusion of surrounding residential and related development as viewed by parkway users is measured by the extent to which adjacent development is seen because of the loss of mature tree cover due to parkway or other roadway construction elements. The greater the loss of mature vegetation that screens views of development, the greater the impact intensity. In some instances, however, the impact could be reduced by mitigation measures that include forest tree planting to screen out views of adjacent development from the parkway. The intensity of impacts is defined as follows:

Negligible — There would be no change in the visual character or experience of the area.

Minor — The visual impact would be apparent, but slight. The viability of the visual character and experience of the area would not be affected. With mitigation, impacts would be reversed.

Moderate — The visual impact would be sufficient to noticeably change the character and experience of the area. Mitigation could restore the visual resource.

Major — The visual impact would be substantial and permanent. Mitigation would not restore the resource.

The duration of impacts is defined as either short term, 1–5 years, during which surface revegetation and forest tree planting mitigation measures are being established, and long-term, 5–20 years, in which revegetation and tree planting mitigation measures would be established, and the visual character and experience of the area would be perceptively restored.

Recreational Users and Facilities. Impacts of recreational and interpretive opportunities for parkway users were analyzed based on information provided by staff of the Natchez Trace Parkway. These included the completion of this section of the Natchez Trace Parkway to offer users an uninterrupted traveling experience, without the disruption of detouring through the greater Jackson metropolitan area, and the opportunity to enjoy interpretive and educational programs that could be provided at the Choctaw Agency site. Impacts would be mostly beneficial except where actions would not provide for interpretive or educational opportunities.

Local Residents. Topics to analyze were initially developed from comments recorded at the project scoping meeting. Concerns primarily focused on potential quality of life impacts to adjacent residential subdivisions. In addition, residents expressed various concerns about local changes they thought would affect their daily lives. Concerns expressed most often were considered to have the greatest importance; these included community character, privacy, seclusion, minimal traffic congestion, access to regional recreational facilities and attractions, and access to high-quality schools in the area. The real estate market in the greater area was also analyzed, and some assumptions were made about what constituted the most desirable (higher quality) residential locations.

Topic elements applicable to evaluating impacts to local residents were identified as community character, community qualities, and accessibility. The intensity of impacts is defined as follows:

Negligible — There would be no change in the community character, quality, or accessibility of the area.

Minor — The impact to community character, quality, and accessibility would be slight. The viability of community character, quality, and accessibility in the area would not be greatly affected. Mitigation measures would lessen impacts.

Moderate — The impact to community character, quality, and accessibility would be sufficient to noticeably change the character or experience of the area. The impact would be permanent; however, mitigation measures could lessen impacts.

Major — The impact to community character, quality, and accessibility would be substantial and permanent. Mitigation measures would not lessen impacts.

The duration of impacts is defined as either short-term, 1–5 years, during which time local residents would adjust to changes or mitigation measures were being implemented, and long-term, 5–20 years, during which mitigation measures such as tree planting would be fully established and the area's character perceptively restored.

Noise. The methodology used to assess impacts is outlined in 23 CFR 772 (see the "Affected Environment") and generally required by the Federal Highway Administration for federally funded projects. Although this section of the parkway motor road is located within the Ridgeland city limits, the city noise control ordinance has no standards that define noise limits for roadway traffic noise.

Noise level impacts are presented for eight areas, including residential areas adjacent to the project area, Greenwood Plantation, and the Choctaw Agency site. The residential areas include the east and west ends of the Windrush subdivision, the east and west ends of the Dinsmor subdivision, the Canterbury subdivision, and residences south of the NPS right-of-way along Brame Road.

The FHWA Traffic Noise Prediction Model (STAMINA 2.0) was used to generate noise contour data and to predict traffic noise at each residential location by alternative. Using existing traffic volumes, noise levels for 1999 were modeled for each residential location. Peak-hour traffic volumes (per 23 CFR 772) were then projected to the years 2003 and 2020, consistent with the traffic analysis. Future vehicle noise levels were determined for existing noise levels, plus for 2003 and 2020, for each alternative.

Traffic noise levels will vary depending on actual traffic volumes, atmospheric conditions, vegetation density, and topography. However, variations in atmospheric conditions and vegetation density are not taken into account in the model. The topography across the site is relatively flat (in terms of noise propagation); thus, no adjustments were required. Proposed road depressions were not considered because the length of the depressions would not be sufficient to mute traffic noise throughout the project area. Existing noise barriers along the south side of the Windrush and Canterbury subdivisions and along the north side of the Dinsmor subdivision were taken into account in the analysis.

Noise level changes (increases or decreases) were determined by comparing existing conditions to the measured data for each alternative to determine if the noise levels would exceed FHWA noise abatement criteria (NAC) limits. Table 8 shows these limits for different land uses based on exterior hourly Leq levels. The calculated hourly Leq levels are based on peak-hour traffic volumes.

Within and near the project area are several culturally significant properties — the Choctaw Agency site, a section of the Old Natchez Trace (Old Agency Road), and the Greenwood Plantation (which is approximately 162 meters [530 ft.] south of the corridor). Under 23 CFR 772, these areas would be assigned to activity category A, with a maximum exterior noise of 57 dB(A) in the vicinity of these sites if "serenity and quiet [we]re of extraordinary significance and serve[d] an important public need." Although culturally significant, serenity and quiet have not been identified as significant qualities at these sites. Old Agency Road (which corresponds to the section of Old Natchez Trace) in the project area is now paved and carries large volumes of traffic. Therefore, these sites were classified as category B, which includes parks, picnic areas, recreation areas, and residences.

Along edges of the NPS right-of-way are the Windrush and Canterbury subdivisions to the north, and Dinsmor subdivision and Brame Road to the south. In addition, St. Andrew's School is along the

TABLE 8: DESIRABLE NOISE LEVEL ABATEMENT CRITERIA UNDER 23 CFR 772

Activity Category	Hourly Noise Level Leq(h) dB(A)*	Description of Activity Category
A	57 (exterior)	Lands where serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (exterior)	Developed lands, properties, or activities not included in category A or B.
D	n/a	Undeveloped lands
E	52 (interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: FHWA, *Highway Traffic Noise Analysis and Abatement: Policy and Guidance* (1995).

* Leq(h) is the average (equivalent) of all sound levels occurring during a specific hour at a particular location

northern edge of the corridor immediately east of the Canterbury subdivision. Maximum exterior noise in the vicinity of these residential and school sites is limited to 67 dB(A), FHWA activity category B.

Based on this analysis, the dB(A) level at which a substantial noise impact would result and mitigation must occur is at or approaching 67 dB(A) for each of the areas identified above. In accordance with Mississippi state noise policy, there would also be a substantial impact if a site was predicted to incur an increase of 15 dB(A) more than existing noise levels. Because the predicted changes in noise levels were not substantial, but would be noticeable, the following changes in dB(A) levels were used to identify the intensity of a noise impact. These intensities were derived from FHWA guidance for performing noise impact analyses (FHWA 1995).

Negligible — A 0 to 5 dB(A) change in noise levels

Minor — A 6 to 10 dB(A) change in noise levels

Moderate — An 11 to 15 dB(A) change in noise levels

Major — Greater than a 15 dB(A) change in noise levels

Variation in noise levels between the alternatives is negligible because the parkway motor road traffic volumes and the resulting noise levels would be the same in each alternative. The parkway motor road is the predominant source of noise in all alternatives.

IMPACT TOPICS CONSIDERED BUT DISMISSED FROM FURTHER ANALYSIS

Prime and Unique Farmlands

Federal agencies must assess the effects of their actions on farmland soils classified by the U.S. Department of Agriculture's Natural Resources Conservation Service as prime or unique. As identified in the "Affected Environment," there are no productive farmlands within the project area, and no impacts to prime farmlands would occur.

Floodplains

There are 100-year floodplains associated with Purple Creek on the eastern edge of the project area. A negligible amount of the floodplain borders Highland Colony Parkway and the project area where the parkway motor road would connect with Highland Colony Parkway to the east. Any potential impact would be negligible because tributaries to Purple Creek would continue to flow unimpeded through the culvert, and the character or drainage pattern of Purple Creek or its tributaries would not be altered. Therefore, impacts on floodplains in all alternatives would be negligible.

NPS *Floodplain Management Guidelines* exempt "entrance, access, and internal roads to or within National Park Service units" from floodplain compliance procedures. Because the only actions proposed in alternatives 1 through 5 would be the construction of roads, all actions in these alternatives would be considered exempt.

Environmental Justice

Executive Order 12898, "General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires all federal agencies to address disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. As discussed below, no alternative would affect minorities or low-income populations or communities as defined in the Environmental Protection Agency's "Draft Environmental Justice Guidance" (July 1996); therefore, environmental justice was not addressed.

According to data provided by the Ridgeland Chamber of Commerce, the city population in 1999 was 18,420. Approximately 78.1% of the city population was white, 19.4% was black, and the remaining 2.5% was comprised of Asian, Hispanic, or other races. The average per capita income was $26,416, and the average household income was $54,513. In comparison, the racial composition of Madison County in 1999 was 52.1% white and 46.6% black. Per capita income was lower at $20,720; average household income was approximately the same. The *Year 2020 Comprehensive Plan for the City of Ridgeland* also summarizes demographic data for Ridgeland. This plan indicates that in 1990 Ridgeland's per capita income was the highest in Mississippi.

Information provided by the assessor's office in Madison County indicated that the three major subdivisions surrounding the project area — Windrush, Canterbury, and Dinsmor — are gated communities. (As noted on the Land Use map in the "Affected Environment" chapter, Windrush and Canterbury are on the northern boundary of the project area, Dinsmor on the southern boundary.) Windrush is an exclusive subdivision comprised of unique homes with prices ranging from $600,000 to $700,000. Canterbury has a wider range of higher priced homes. Dinsmor has the most diversity of the three subdivisions, with prices ranging from $120,000 to $700,000.

The level of per capita income and the housing prices in the subdivisions surrounding the project area indicate that there are no minorities or low-income populations in the vicinity of the project or in the city of Ridgeland that would be directly or indirectly affected by the alternatives.

Consultations with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana are underway to ensure that any potential impacts to these populations as a result of changes to the Choctaw Agency site would be avoided or mitigated. More specific impacts and mitigation are presented under "Cultural Resources" in this chapter and under "Mitigations for Special Resource Concerns" in the "Alternatives, Including the Proposed Action" chapter.

IMPACTS OF THE REVISED PROPOSED ACTION

Transportation / Traffic Impacts

Access

Analysis. All access movements would continue to be provided, but west-oriented traffic to and from Richardson Road (primarily from the Windrush and Canterbury subdivisions) would have a slightly longer trip than under existing conditions. Short-term adverse impacts could be expected as drivers adjusted to the new travel routes. A new crossover road between Old Agency Road and Old Agency Road Relocated, with a bridge over the parkway motor road, would provide north-south access for local traffic and allow residents to access both Old Agency Road and Old Agency Road Relocated. Additional signing would be required at the existing Old Agency Road / Highland Colony Parkway intersection for westbound through-traffic to direct them to the Old Agency Road Relocated intersection and away from the historic Old Agency Road.

Impact Highlights of the Revised Proposed Action

- Additional east-west traffic capacity would be provided by extending Old Agency Road Relocated from just east of Whippoorwill Lane to Highland Colony Parkway.
- Local access would be provided across the project area via a new crossover road that would bridge the parkway motor road and connect Old Agency Road to Old Agency Road Relocated.
- The new bridge over the parkway motor road would be shorter and farther east of residential development, compared to alternative 5.
- Safety on Old Agency Road would be improved because Old Agency Road Relocated would not merge with Old Agency Road east of Richardson Road. The intersections at either end of the crossover road would require vehicles to come to a full stop and would provide adequate sight distances before vehicles turned onto Old Agency Road.
- The Greenwood Plantation driveway would be restored to Old Trace appearances within the project area (only in this alternative).

Residents in the Dinsmor subdivision, at Greenwood Plantation, and along Brame Road would have direct access to Old Agency Road Relocated, which could shorten travel distances slightly and provide better access to regional roadways. Access to St. Andrew's School and its athletic fields would continue by way of Old Agency Road or by way of the new crossover road from the south.

No direct local access would be provided to the parkway motor road. A benefit of the revised proposed action would be the addition of access from the parkway motor road to the Choctaw Agency site.

Cumulative Impacts. Completing the parkway motor road through the project area would improve the continuity of interstate recreational travel for parkway users.

Conclusion. Impacts to access would be adverse, but minor. Access for westbound through-traffic and some local traffic would be relocated, causing adverse impacts on some travel routes. While some travel patterns would change, access would still be provided in all travel directions for each local road.

Volumes

Analysis. Although much of the existing traffic (approximately 6,000–7,000 vehicles per day) would remain on Old Agency Road to access the Windrush and Canterbury subdivisions by way of Richardson Road, most of the volume of through-traffic and local traffic from the Dinsmor subdivision, Greenwood Plantation, and Brame Road (approximately 3,000-4,000 vehicles per day) would shift from Old Agency Road to Old Agency Road Relocated. This shift would improve traffic operations on Old Agency Road. Volumes on both roads are estimated at levels within the threshold for collector roadways.

Local access to the parkway motor road would be provided at I-55, U.S. 49, Pinewood Road, and I-20; no access would be provided within the project area. Because of the availability of local access to the parkway motor road and the current lack of east-west transportation routes near the project area, traffic volumes could increase from 7,200 vehicles per day when this parkway section opened to approximately 18,000 vehicles per day in 2020. This growth in traffic volume would be a result of local increases in commuter traffic.

Cumulative Impacts. Proposed long-range improvements in Ridgeland's *Transportation Plan Update* include constructing additional east-west transportation routes. If these plans were implemented by local or state agencies, they would increase east-west traffic capacity for commuters, potentially minimizing the growth in commuter traffic along the parkway motor road through Ridgeland (including the project area).

Conclusion. Volume impacts would be beneficial and moderate, as existing traffic would be split between Old Agency Road and Old Agency Road Relocated. Overall volumes are expected to remain the same. Traffic volumes on the parkway on opening day would be approximately 7,200 vehicles.

Safety

Analysis. A reconfigured intersection at Richardson Road and Old Agency Road would reduce vehicular conflicts, thus improving safety. East of Richardson Road, Old Agency Road would retain its current configuration; therefore, current safety issues would remain. Closing the intersections on Old Agency Road at the Greenwood Plantation driveway and at Brame Road would improve safety issues related to sight distance and conflicting traffic movements. Old Agency Road Relocated would be constructed to AASHTO standards, which are based on safety, so the new road is expected to be safer than Old Agency Road, which was not constructed to these standards. Any changes to Old Agency Road to enhance safety would be the responsibility of the city of Ridgeland, in cooperation with the National Park Service and the Mississippi Department of Archives and History.

Emergency vehicle response times for many residents would remain unchanged, but could be improved. Safer and better designed access roads such as Highland Colony Parkway, Old Agency Road Relocated, and the new crossover road between Old Agency Road Relocated and Old Agency Road would allow emergency vehicles to make better time. Specifically, providing shoulders on Old Agency Road Relocated would allow cars to pull over to let emergency vehicles pass, whereas the existing Old Agency Road does not allow the same maneuverability.

In addition, the crossover road between Old Agency Road Relocated and Old Agency Road would provide an alternate route to Highland Colony Parkway for emergency vehicles traveling across the parkway motor road. Safety improvements and lower traffic volumes on the new roads would most likely offset the additional intersection and slightly longer trips that emergency vehicles would have to make, particularly for residents south of the parkway. Decreased traffic volume on Old Agency Road could also improve emergency response times for residents north of the parkway during peak periods.

Cumulative Impacts. No safety-related cumulative impacts were identified.

Conclusion. Safety impacts would be beneficial and moderate as a result of constructing new access roads and intersections with improved sight distances. Emergency vehicle response times for most residents would remain unchanged, but the improved design of Old Agency Road Relocated and the crossover road, alternate travel routes for emergency vehicles, and decreased traffic on Old Agency Road could all improve emergency response times to a minor degree.

Cultural Resource Impacts

Historic Resources

Analysis. The section of the Old Natchez Trace within the project area is listed on the National Register of Historic Places, and the parkway motor road would cross it approximately at grade. This would result in an adverse, moderate effect under section 106 of the National Historic Preservation Act of 1966, as amended, because of the physical disturbance associated with truncating the road segment. Restoring this road portion to an appearance resembling what was likely typical during the late 18th and early 19th centuries (the Natchez Trace's period of significance) would mitigate this adverse effect. Posting an Old Natchez Trace marker and interpreting the Old Trace for visitors would also help mitigate any adverse effect. Closing a 0.7 kilometer (0.4 mi.) portion of Old Agency Road to vehicular traffic from near Whippoorwill Lane to Richardson Road within the NPS right-of-way would alter historical patterns of circulation and continuous use, also an adverse, moderate effect.

Removing a portion of the Greenwood Plantation driveway within the NPS right-of-way would have an adverse, moderate effect on access to the plantation, which is eligible for listing on the national register. Closing a portion of the driveway would irretrievably alter the historical approach to this property. To mitigate this effect, photo-documentation would provide an archival record of the driveway's current character-defining attributes. The National Park Service would work with the property owner to retain as much of the historical character of the property as possible and to screen the property from the parkway through the use of vegetation.

Cumulative Impacts. In relation to other past, present, and reasonably foreseeable actions, closing a portion of Old Agency Road (Old Natchez Trace) to vehicular traffic would represent an incremental loss of historical patterns of circulation and continuous use. While sections of Old Agency Road would remain open outside the project area, the experience of motorists as they drove along the extended road corridor would be substantially changed.

Conclusion. The parkway motor road crossing of the Old Natchez Trace approximately at grade would truncate this segment of the trace, an adverse, moderate effect. Restoring a 0.7 kilometer (0.4 mi.) portion of Old Agency Road (Old Natchez Trace) to historical appearances and interpreting it would mitigate this effect. Closing a portion of Old Agency Road to vehicular traffic within the NPS right-of-way would alter historical patterns of circulation and continuous use. Removing a portion of the Greenwood Plantation driveway would irretrievably alter the historical approach to this property, an adverse, moderate effect.

Archeological Resources

Analysis. While the Choctaw Agency site would be avoided during construction, the potential for inadvertent discoveries of archeological resources in the construction zone for the parkway motor road and Old Agency Road Relocated might be high due to their proximity to this site. Because of the sensitive nature of the area and its significance to the Choctaw Nation and others that regard the area as ancestral territory, a memorandum of understanding is being developed in consultation with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of Choctaw in Louisiana to deal with inadvertent archeological discoveries and other concerns.

Suggested measures in the memorandum of understanding and noted in the "Mitigations for Special Resource Concerns" include providing an archeologist onsite at all new construction areas to monitor activities. Inadvertent discoveries would be handled by immediately notifying tribal historic preservation officers and Natchez Trace Parkway cultural resource staff. Any adverse effects to potential sites would be mitigated through consultation with tribal groups and would be resolved through avoidance and/or site documentation.

The access road and parking area at the Choctaw Agency site would be constructed to avoid impacts to archeological resources. The National Park Service would ensure that adequate site security measures were implemented before interpretive site development and public programs were initiated. These measures could include park patrols, surveillance, fencing, and educational outreach programs. Providing direct access from the parkway motor road would allow the area to be more easily monitored. The access road would be designed to provide the least possible disturbance to the cultural setting of the area.

Interpretive program design and development for the Choctaw Agency site would be accomplished through consultation with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana. These groups would also be consulted in developing new Natchez Trace Parkway interpretive materials that were accurate and inclusive of Native Americans' viewpoints.

Other archeological sites in the project area date from the early to mid 20th century and have been determined to be ineligible for the National Register of Historic Places due to a lack of historical integrity and significance. Therefore, possible construction disturbance of these sites is not expected to adversely affect significant archeological information.

Cumulative Impacts. No cumulative impacts were identified.

Conclusion. The Choctaw Agency site would be avoided by construction disturbance. Any inadvertent archeological discoveries would result in consultation with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana to ensure appropriate mitigation, in accordance with a memorandum of understanding. The Park Service would take appropriate measures to avoid or mitigate potential adverse effects related to public visitation before opening the site to interpretation. The Choctaw and other tribal representatives would be contacted to help develop new parkway interpretive materials that would be accurate and inclusive of Native Americans' viewpoints.

Natural Resource Impacts

Air Quality

Analysis. Under the revised proposed action the peak-hour traffic volumes for Old Agency Road between Richardson Road and Highland Colony Parkway are projected to be 788 vehicles in 2003 and 2,000 vehicles in 2020 (see table 9 below). The revised proposed action was subjected to a graphical screening test, which makes various conservative, worst case assumptions about meteorological conditions, traffic, and site conditions. (In order to model the worst case scenario, the CO screening test defaults to a vehicular speed of 40 kph [25mph], even though the actual speeds could be higher.) The critical distance for a CO screen is the distance a receptor can be from a given roadway without experiencing any chance of a significant air quality impact. Table 9 shows that for the expected traffic volumes and speeds the critical distance for a CO screen would be less than 3.1 meters (10 feet) in 2003 and again in 2020. No receptors are located within this critical distance; therefore, no exceedances of the national ambient air quality standards are anticipated, and air quality impacts would be negligible.

TABLE 9: AIR QUALITY DATA SUMMARY, REVISED PROPOSED ACTION

Year	Average Speed	Design Hour Traffic Volumes	Critical Distance	Closest Receptor
2003	40 kph (25 mph)	788	<3.1 m (<10 ft.)	Approx. 30.5 m (100 ft.)
2020	40 kph (25 mph)	1,000	<3.1 m (<10 ft.)	Approx. 30.5 m (100 ft.)

Cumulative Impacts. Traffic volumes on other roadways throughout the project area would continue to increase as population increased. However, the cumulative effect of the combined traffic volumes would not be expected to exceed national ambient air quality standards for carbon monoxide.

Conclusion. The revised proposed action would have negligible impacts on air quality over the short and long term. This alternative would not cause violations of the national ambient air quality standards for carbon monoxide; therefore, no mitigation measures would be required.

Soils

Analysis. The parkway motor road, Old Agency Road Relocated, the new Old Agency Road / Old Agency Road Relocated crossover road, and new access routes would be constructed through soils classified as silt loams, which have low strength for streets and roads. Low strengths result because the subsoil and the underlying clayey material shrink and swell with seasonal changes in moisture and occasional flooding. Mitigating actions would be taken to reduce these effects (see page 31).

Clearing some vegetation from the project area would expose soils to erosion by water and wind. Some soils could be enhanced and improved with the removal of roads and the restoration of vegetation. A soil erosion control plan specifically designed for the revised proposed action would be prepared and implemented during the construction phase, as described in "Mitigations for Special Resource Concerns" (see page 32).

Long-term and negligible impacts on project area soils would include excavation, the mixing of soil horizons, and the addition of aggregate fill and road surface pavement over existing soils. The exact amount of soil that would be excavated is unknown; however, 12.1 hectares (30 ac.) of vegetation would be affected by this alternative, which is indicative of the surface acreage of soil that would be impacted by construction.

Cumulative Impacts. No cumulative impacts were identified under this alternative.

Conclusion. Long-term, negligible impacts would occur to soils due to excavation. Mitigation efforts would be undertaken to prevent soil erosion and to address the expansive characteristics of soils.

Wetlands

Analysis. A total of 0.7 hectare (1.7 acres) of palustrine forested, scrub/shrub, and emergent wetlands would be permanently filled as a result of constructing the parkway motor road, relocating Old Agency Road, and constructing the crossover road from Old Agency Road to Old Agency Road Relocated. Table 10 identifies the potential adverse or beneficial impacts to wetland areas 1 through 10 (see "Affected Environment" for location).

Impacts have been analyzed assuming that mitigations would be in place (see page 32). All wetlands would be flagged before construction, and all construction activity would avoid these areas to the extent possible. Where roads were developed through wetlands, no disturbance would take place outside the construction limits of the project, and measures necessary to protect the integrity of the wetland would be implemented. Some of these measures would include using temporary erosion control devices and redirecting flowing and intermittent streams through culverts during construction. Selective clearing in wetlands would be permitted, provided stumps were not grubbed and ground disturbance was avoided.

Long-term, adverse impacts would occur in wetland areas 2, 4, 6, 8, and 9 because of cuts or the placement of fill to construct new roadbeds and shoulders. The remaining wetland areas (1, 3, 5, 7, and 10) would not be adversely affected in the long term, although some short-term impacts such as soil compaction and damage to wetland vegetation could occur as equipment and workers constructed new roads. Some beneficial, long-term impacts would occur to wetland areas 5 and 7 because existing roads would be removed and areas restored.

The parkway motor road would impact a small corner on the northern edge of wetland 2; the open water portion of this wetland would not be impacted. Less than 1% of the palustrine scrub/shrub portion of this wetland would be impacted, resulting in negligible impacts to the overall function and value of the wetland.

The parkway motor road and Old Agency Road Relocated would impact approximately 26% of wetland 4 and 45% of wetland 6, resulting in a combined reduction of these two wetlands by 40%. The parkway motor road alignment would impact approximately 0.3 hectare (0.9 ac.) of wetland 6, the greatest amount of impact. Old Agency Road Relocated would impact approximately 0.04 hectare (0.1 ac.) of wetland 6 in the southern portion of the project area. Wetlands 4 and 6 are interconnected in the southern section of the project area near the Dinsmor subdivision. The development of the parkway motor road and Old Agency Road Relocated would sever wetlands 4 and 6 into four or five separate areas, resulting in a long-term, major adverse impact. Although the local hydrology could be maintained through the use of culverts, the loss and fragmentation of wetland plant communities would impair their integrity and reduce the overall function and value of these wetlands. Loss and fragmentation of these wetlands would reduce their overall ability to provide flood storage, groundwater discharge and recharge, as well as their overall function to provide cover and habitat for wildlife.

The parkway motor road and the new crossover road between Old Agency Road and Old Agency Road Relocated would impact the northwestern edge of wetland 8. Old Agency Road Relocated would also impact a small section of wetland 8 in the southern portion of the project area. Combined impacts to this wetland would be less than 0.1 hectare (0.2 ac.). Long-term impacts to this wetland would be moderate, with a loss of 0 and habitat for wildlife. Hydrology could be maintained through the use of a culvert.

TABLE 10: WETLAND IMPACTS, REVISED PROPOSED ACTION

Wetland	Size of Wetland Affected	Percentage of Wetland Area Affected	Impact Intensity and Direction
1	0	0	No impact
2	<0.01 ha (<0.01 ac.)	<1	Negligible adverse
3	0	0	No impact
4 and 6	0.4 ha (1.1 ac)	40	Major adverse
5	0	0	Minor beneficial
7	0	0	Minor beneficial
8	<0.1 ha (0.2 ac)	14	Moderate adverse
9	0.2 ha (0.4 ac)	13	Moderate adverse
10	0	0	No impact

Palustrine emergent wetlands associated with wetland 9 would be impacted in the southern section of the project area as a result of Old Agency Road Relocated. Approximately 13% of this wetland would be impacted. Long-term impacts would be moderate. Old Agency Road Relocated would reduce the overall ability of this wetland to provide flood storage and habitat for small mammals and birds.

In wetland areas 5 and 7 the removal of road surfaces, road fill, shoulders, and culverts could enhance the integrity and connectivity of wetland areas. Where roads were proposed for removal, disturbed areas outside the stream channels would be restored to the original contours and revegetated with native species. Stream channels could be returned to their natural state, and the local hydrology could be maintained or restored if necessary. Such restoration activities could result in minor to moderate beneficial impacts to the wetland systems.

The 0.7 hectare (1.7 ac.) of wetlands impacted would consist of approximately 0.4 ha (1.1 ac.) of palustrine forested wetlands, 0.1 ha (0.2 ac.) of palustrine scrub/shrub wetlands, and 0.2 hectare (0.4 ac.) of palustrine emergent wetlands.

Based on the NPS wetland protection guidelines *(DO 77-1: Wetland Protection)*, a statement of findings is required to implement this alternative due to adverse impacts to wetlands. The draft "Statement of Findings" is included in appendix E for public and agency review. Any comments on the statement of findings will be incorporated following the release of this *Final Supplemental Environmental Impact Statement*. The final signed statement of findings will be attached to the record of decision for this project.

Cumulative Impacts. Another section of parkway motor road must be constructed immediately to the west of project 3P13 to complete this portion of the Natchez Trace Parkway. Referred to as project 3P13-West, this project would cause an additional 0.6 hectare (1.5 ac.) of wetlands to be permanently filled. A separate statement of findings is being prepared for this project. The total impact on wetlands for both projects would be the long-term loss of 1.3 hectares (3.2 ac.) of wetlands.

A 21-mile, paved multi-use trail has been proposed along the Natchez Trace Parkway, including the area of project 3P13 (see page 66 for more details). No trail bridges are proposed along this segment of the parkway; thus it is assumed that culverts would be placed in areas where the trail would cross drainages. Fill and excavation operations associated with establishing the trail grade and placing culverts would impact additional wetlands. A statement of findings will be prepared and attached to the final environmental assessment for impacts associated with the multi-use trail. Wetland impacts and proposed mitigations would be identified in that statement of findings.

Conclusion. Approximately 0.7 hectare (1.7 ac.) of wetlands would be permanently filled to construct new roads. Long-term, major adverse impacts would occur to wetlands 4 and 6, resulting in up to a 40% reduction in the size of the combined wetland areas and dividing the wetlands into four or five separate areas. Long-term, moderate adverse impacts would occur to wetlands 8 and 9. Negligible adverse impacts would occur to wetland 2. No adverse impacts would occur to wetlands 1, 3, and 10. Removing roads could provide opportunities to improve wetland systems in areas 5 and 7. Developing remaining parkway sections to the west would result in an additional loss of 0.6 ha (1.5 ac.) of wetlands and a cumulative wetland impact of 1.3 ha (3.2 ac.).

Water Quality

Analysis. The small unnamed tributaries of White Oak Creek and Purple Creek are generally associated with the wetland system described in the "Affected Environment." Because of this association, potential impacts to water quality from constructing the parkway motor road, Old Agency Road Relocated, and the crossover road would be the same areas as those described for wetland impacts.

Constructing the various roads in the project area would cause short-term, negligible adverse impacts on the water quality of streams. Soil and other debris could be inadvertently discharged into streams, and streams would have to be temporarily diverted. However, mitigating actions that would reduce short-term effects would include implementing a soil erosion control plan, the use of special construction techniques, and devices such as culverts to ensure that streams continued to flow unimpaired in their current locations. Other examples of preventive measures are described beginning on page 30.

Vehicles discharge oils, fuels, and other petroleum products that can be washed into nearby streams and degrade water quality. The level of impact is directly related to the number of vehicles that travel a road daily. The Federal Highway Administration has researched methods for assessing and mitigating highway pollution runoff. The conclusion of this research is that highways traveled by fewer than 30,000 vehicles per day cause minimal effects on water resources (NPS 1998). Anticipated traffic volumes of the Natchez Trace Parkway and Old Agency Road Relocated would be less than 30,000 vehicles per day under the revised proposed action, as well as all the other alternatives. Therefore, water quality impacts caused by vehicle-contaminated runoff would be long term, but negligible.

Long-term, minor impacts on the surface-water drainage patterns in the project area would occur under the revised proposed action, as well as the other alternatives, because of road construction and excavation for the parkway motor road, Old Agency Road Relocated, the crossover road, and some new access roads. Water runoff from road surfaces, embankments, and other parkway elements would be directed through culverts and other water drainage structures. The local surface-water drainage patterns would not change, although peak flow and volume of these small streams receiving stormwater discharge could increase. The restoration of portions of Old Agency Road and access roads within the project area would allow for the enhancement or reestablishment of historic drainage patterns that could have been altered by these roads.

Cumulative Impacts. No cumulative impacts were identified.

Conclusion. Short-term, negligible adverse impacts would occur to water quality as a result of construction activity releasing soil and debris into unnamed streams. Anticipated traffic volumes on the Natchez Trace Parkway, Old Agency Road, Old Agency Road Relocated, and other local access roads would be less than 30,000 vehicles per day; therefore, water quality impacts caused by vehicle-contaminated runoff would be long term, but negligible. Stormwater discharged into local streams could result in long-term, minor impacts from increased peak flows. The restoration of removed and relocated roads could benefit local hydrologic and drainage patterns.

Vegetation

Analysis. Constructing the parkway motor road, a new crossover road with a bridge, and Old Agency Road Relocated would result in the clearing of vegetation, the loss of mature trees, and the loss of understory. Portions of the roadways would be located in previously undeveloped areas. Old Agency Road (from near Whippoorwill Lane east to Richardson Road) and portions of Brame Road and the Greenwood Plantation driveway within the project area would be removed. Old Agency Road and the Greenwood Plantation driveway within the NPS right-of-way would be restored to their historical appearances. The other removed roadways would eventually be revegetated with native plant materials and allowed to return to their natural state, replacing some of the vegetation lost to past and proposed road construction. Other actions that would be taken to minimize the amount of vegetation lost include avoidance of excessive vegetation clearing and the implementation of various erosion prevention measures (see mitigations for vegetation impacts, page 33).

Four types of upland communities were identified within the parkway project area (NPS 1999) — mixed-hardwood forest, pine/oak forest, late successional fields, and agricultural fields (agricultural fields is a descriptive term and is not indicative of current agricultural use). Table 11 indicates the impacts by vegetation type. While individually these impacts would most likely be minor to moderate, collectively the net loss of over 10.0 hectares (24.9 ac.) of vegetation would be moderate to major because it would be permanent, highly noticeable, and substantial within the boundaries of the project.

Mixed-Hardwood Forest — Mixed-hardwood forest communities are adjacent to the palustrine forested wetlands in the western part of the project area. This forest would be adversely impacted by the parkway motor road alignment to the north. Approximately 0.8 hectare (2.0 ac.) of hardwood forest would be permanently lost, resulting in a long-term minor impact. Short-term effects would also occur during construction, including the loss of some tree canopy and other understory vegetation.

Pine/Oak Forest — This type of upland forest community occurs in the central portion of the parkway motor road corridor to the west of Brame Road and slightly west of Richardson Road. The construction of the parkway motor road, the crossover road, and Old Agency Road Relocated with approximate widths of 30.5 m (100 ft.) would result in the clearing of a total of 3.8 hectares (9.5 ac.) of pine/oak forest, an adverse, long-term, moderate to major impact. However, plans to remove and revegetate or restore with native species approximately 0.5 hectare (1.2 ac.) of Brame Road and the Greenwood Plantation driveway would result in a net loss of 3.3 hectares (8.3 ac.).

Late Successional Fields — This vegetative type is encountered in the central part of the parkway motor road corridor generally west of the pine/oak forest. These fields would be traversed by the parkway motor road and Old Agency Road Relocated. Approximately 4.1 hectares (10.2 ac.) would be affected during construction, an adverse, long-term impact. However, approximately 0.1 hectare (0.2 ac.) of existing roadway in these fields would be removed and revegetated, and approximately 1.5 hectares (3.7 ac.) of Old Agency Road would be restored to a grass surface. The net loss of these fields would be approximately 2.5 hectares (6.3 ac.), a minor to moderate effect.

Agricultural Fields — Agricultural fields are restricted to the east end of the project area, which includes the Choctaw Agency site. These fields would be traversed by the new parkway motor road, portions of Old Agency Road Relocated, and the Choctaw Agency access road and parking area, resulting in the loss of approximately 3.4 hectares (8.3 ac.). Impacts to these fields would be minor to moderate, as road construction activities would remove additional fields from agricultural uses, such as pasture; however, there is no lack of such fields in the region.

TABLE 11: VEGETATION IMPACTS, REVISED PROPOSED ACTION

	Vegetation Loss for	Revegetation		
Vegetation Type	New Roads	Old Agency Road	Other Roads	Net Loss
Mixed Hardwood	0.8 ha (2.0 ac.)	*0*	*0*	0.8 ha (2.0 ac.)
Pine/Oak	3.8 ha (9.5 ac)	*0.2 ha (0.5 ac.)*	*0.3 ha (0.7 ac.)*	3.3 ha (8.3 ac.)
Late Successional Fields	4.1 ha (10.2 ac.)	*1.5 ha (3.7 ac.)*	*0.1 ha (0.2 ac.)*	2.5 ha (6.3 ac.)
Agricultural Fields	3.4 ha (8.3 ac.)	*0*	*0*	3.4 ha (8.3 ac.)
Net Total	**12.1 ha (30.0 ac.)**	***1.7 ha (4.2 ac.)***	***0.4 ha 0.9 ac.)***	**10.0 ha (24.9 ac.)**

Note: italicized numbers represent areas restored or replanted with native vegetation.

Cumulative Impacts. A multi-use trail, which is part of the *Natchez Trace Comprehensive Trail Plan,* has been approved for future construction within the project area. Impacts to the vegetation community within the project area would total approximately 0.4 hectare (1.1 ac.). This estimate is based on a trail width of 2.4 meters (8 ft.), including an additional 0.6 meter (2 ft.) of clearing on either side of the trail for shoulders. Minor vegetation impacts would result from clearing during trail construction; however, vegetation along the corridor would eventually reestablish itself.

Other Natchez Trace Parkway projects to the east and west of project 3P13 have impacted and will continue to impact vegetation communities along the length of the parkway. Although impacts to vegetation communities would be negligible to minor on a more regional scale, the degree of the impact could increase when large amounts of vegetation were removed in a local area.

Each of these vegetation types is common in the Jackson area. The cumulative vegetation impacts of this project, the multi-use trail, and other adjoining parkway projects (such as section 3P3 to the east) would be negligible on a local or regional scale.

Conclusion. Developing new roads and a parking area would result in the loss of approximately 12.1 hectares (30.0 ac.) of vegetation during construction. Removing some existing roads, such as portions of Old Agency Road, Brame Road, and the Greenwood Plantation driveway, would allow approximately 2.1 hectares (5.1 ac.) to be restored to historical appearances or revegetated. The long-term impact would be moderate to major within the project area, with a net loss of 10.0 hectares (24.9 ac.) of vegetation. Constructing a multi-use trail within the project area and other parkway projects to the east and west would cause a permanent cumulative loss of vegetation. Each vegetation type is common in this area, so the impact would be negligible.

Wildlife

Analysis. Field reviews were conducted in 1993 for an environmental assessment for the extension of several water utilities across the parkway. These surveys identified several of the more common wildlife species occurring within the project area (see "Wildlife" in the "Affected Environment" chapter). Table 4 on page 55 shows numerous other wildlife species that are believed to occur within and adjacent to the project area. None of the species identified is listed by Mississippi or the U.S. Fish and Wildlife Service as endangered, threatened, or of special concern.

Impacts to wildlife habitat would occur along the parkway motor road corridor on both a short-term and long-term basis. Short-term adverse impacts would include the degradation of habitat during construction from noise, temporary vegetation impacts, and increased human and mechanical activity. Long-term impacts would include the permanent loss of habitat related to vegetation loss and the location of wildlife populations adjacent to new roads with high-speed traffic. Habitat loss is directly associated with vegetation loss; as described for vegetation impacts, there would be a long-term loss of 10.0 hectares (24.9 ac.), after revegetation of roads that were removed. Additionally, the alignment of the proposed new parkway motor road, the crossover road, and Old Agency Road Relocated could fragment and isolate some existing woodland habitat. The degree of impact would be considered minor, since size and quality of available habitat would not be permanently or adversely affected from a regional perspective. Those wildlife species not listed as threatened, endangered, or of special concern would most likely continue to be abundant in other areas of the state, and decreases in populations related to the project are not expected. Therefore, the short- and long-term wildlife impacts would be considered minor.

In addition to revegetating or restoring to historical appearances roadways that would be removed (Old Agency Road, Brame Road, and the Greenwood Plantation driveway), the National Park Service would evaluate the potential to improve conditions for wildlife and compensate for project-related impacts on wildlife habitat. Under this approach NPS staff would inventory and evaluate open fields along the proposed motor road route and Old Agency Road Relocated. Those with minimal or limited potential for retention as part of the agrarian scene by lessee farmers would be considered for revegetation to help mitigate wildlife habitat disturbed by construction. Other mitigation techniques would need to address how to divert wildlife from the newly constructed roadways and minimize fragmentation and isolation caused by the presence of the new roadways proposed in this alternative.

Cumulative Impacts. As noted in the vegetation impacts, a new multi-use trail would result in the loss of approximately 0.4 hectare (1.1 ac.) of additional vegetation within the parkway motor road corridor. Other parkway projects adjacent to this segment, such as 3P13-West, could result in the loss of additional vegetation. These vegetation losses, in addition to losses projected under this alternative, could result in some minor local losses of wildlife habitat.

Conclusion. Wildlife impacts in the project area would be minor because regional wildlife populations would not be expected to decrease as a result of losing 10.0 hectares (24.9 ac.) of habitat. Ongoing development of adjacent parkway segments and a multi-use trail could cause minor cumulative effects to some wildlife species because of habitat loss and fragmentation.

Threatened or Endangered Species, or Species of Special Concern

Analysis. None of the plant species identified as Mississippi plant species of special concern are found in the project area. Additionally, as noted in the "Affected Environment," the U.S. Fish and Wildlife Service indicated that no federally listed plant or wildlife species occur in the project area. Thus, impacts to only state-listed wildlife species are considered in the following discussion.

Table 5 lists wildlife species of special concern in Mississippi (see page 56). These species were identified as having the potential to occur or to be impacted within the project area (Mississippi Department of Wildlife, Fisheries and Parks 1991). Field surveys indicate that the remaining state-listed species identified in the "Affected Environment" would not occur within the project area because their habitats were either not supported or their occurrence was considered unlikely.

Table 12 lists the species that would potentially be affected by short- and long-term impacts related to diminished habitat during construction, when vegetation would be cleared, and during post-construction, when permanent vegetation loss would result and moderate-speed roadways had been completed. For all state-listed species of concern, the impacts were found to be either minor (that is, the amount of habitat impacted would not be great enough to substantially decrease a species' population) or negligible (habitat is not present) for species that do occur or could potentially occur within the parkway motor road corridor.

To alleviate short- and long-term impacts within the parkway motor road corridor, mitigation would include the preservation or replacement of vegetation that is important species' habitat. In addition to protecting vegetation as a mitigation technique, sensitive resources identified within the parkway motor road corridor would be regularly patrolled by NPS personnel.

Cumulative Impacts. No cumulative effects would occur because habitat for special status species is lacking.

TABLE 12: SPECIAL STATUS SPECIES IMPACTED BY THE REVISED PROPOSED ACTION

Common Name	Scientific Name	Description	Impact Intensity
Red-shouldered hawk Cooper's hawk	*Buteo lineatus* *Accipiter cooperi*	Neither is expected to decline significantly due to the completion of the parkway.	Negligible
Black vulture Turkey vulture	*Coragyps atratus* *Cathartes aura*	It is probable that both species would feed along the completed parkway.	Negligible
American kestrel	*Falco sparverius*	None sighted, but certainly present. This falcon should find habitat along the parkway after its completion.	Minor
Common barn owl	*Tyto alba*	Could be impacted if portions of the project area reverted to forest habitat; however the population should remain stable following construction.	Minor
Bewick's wren	*Thryomanes bewickii*	None sighted, but could occur due to good habitat conditions.	Negligible
Loggerhead shrike	*Lanius ludovicianus*	This species almost certainly breeds on this section of land and would be a year-round resident.	Minor
Hoary bat	*Lasiurus cinereus*	The hoary bat most likely occurs throughout the state as a migrant.	Negligible
Mole kingsnake	*Lampropeltis calligaster rhombomaculata*	The kingsnake occurs in the area, but no special management technique would be necessary to ensure its survival.	Negligible

Conclusion. No federally listed species are found within the project areas. The potential loss of habitat would have negligible to minor effects on Mississippi species of special concern. Mitigation techniques would be employed to maintain habitat where important.

Socioeconomic Environment

Land Use

Analysis. *Consistency with Local Comprehensive Plans* — Under the revised proposed action the land use designations in Ridgeland's *Year 2020 Comprehensive Plan* would not be affected. Access to and from the various land uses identified in the plan, such as low-density residential, residential estate, and public/quasi-public, would remain.

The development of the parkway motor road and Old Agency Road Relocated would be consistent with Ridgeland's *Year 2020 Comprehensive Plan* map, which shows both the Natchez Trace Parkway and Old Agency Road Relocated through the project area. Old Agency Road Relocated is only shown between Whippoorwill Lane and Brame Road on the map, rather than to Highland Colony Parkway as proposed in this alternative. The closure of Old Agency Road from Richardson Road to Whippoorwill Lane to vehicular traffic would not be consistent with the map, which shows Old Agency Road as a collector road from Highland Colony Parkway west to Livingston Road. Highland Colony Parkway is shown as a major arterial in the *Comprehensive Plan,* which would not be changed under this alternative. Highland Colony Parkway could be affected, however, by a new intersection at Old Agency Road Relocated. Access to the Choctaw Agency site from the parkway motor road would complement the cultural and historical goals and policies identified in the *Comprehensive Plan.*

Consistency with the Local Long-Range Transportation Plan — The development of both the parkway motor road and Old Agency Road Relocated would be consistent with *The Jackson Urbanized Area's Transportation Plan* and the *Transportation Plan Update for the City of Ridgeland.* The Jackson plan identifies the completion of the Natchez Trace Parkway from I-55 west through the project area; the Ridgeland plan identifies the construction of the Old Agency Road Relocated in the next 5 to 10 years. Neither transportation plan indicates whether the existing segment of Old Agency Road through the project area would remain open or closed. Correspondence from the city of Ridgeland (see "Response to Comments" section beginning on page 171) indicates that the city intended to leave Old Agency Road open through the project area to provide additional capacity for east-west traffic. Currently adopted transportation plans do not yet reflect that intent.

Planned Developments — The revised proposed action would not have direct impacts on the planned unit residential development at Brame Road and Highland Colony Parkway. Increased traffic on Brame Road from this development could occur. Plans for an elder care center near the entrance to the Dinsmor subdivision would not be affected by this alternative. Access to the Dinsmor subdivision and Greenwood Plantation would be provided via Old Agency Road Relocated in this alternative. The crossover road between Old Agency Road and Old Agency Road Relocated would allow residents in existing or future subdivisions on either side of the parkway motor road to cross the parkway motor road and access both Old Agency Road and Old Agency Road Relocated.

Cumulative Impacts. No cumulative effects would result from implementing this alternative.

Conclusion. The construction of Natchez Trace Parkway and Old Agency Road Relocated through the project area would be beneficial because both actions are consistent with Ridgeland's *Year 2020 Comprehensive Plan, The Jackson Urbanized Area's Transportation Plan,* and the *Transportation Plan Update for the City of Ridgeland.* The future use of Old Agency Road through the project area is not identified in either transportation plan. However, the closure of a portion of Old Agency Road would not be consistent with the *Comprehensive Plan* map, which shows the road open through the project area. This alternative would complement the *Comprehensive Plan's* cultural and historical goals by providing access to the Choctaw Agency site from the parkway.

Visual Resources

Analysis. The following actions could affect visual resources: constructing the parkway motor road, Old Agency Road Relocated, and a crossover road between Old Agency Road Relocated and existing Old Agency Road (including a bridge over the parkway motor road); plus closing a portion of Old Agency Road from near Whippoorwill Lane to Richardson Road to vehicular traffic and restoring it to Old Trace appearances.

The primary issues defining existing visual resources include the impacts that these actions could have on the gently rolling topography and the hardwood and pine/oak forested areas. The overhead tree canopy, and the intimate scale and visual character of both the wooded areas and contrasting open fields in particular, could be affected. The parkway motor road and Old Agency Road Relocated could be visible from adjacent residential areas (present views are of wooded landscape).

Densely Wooded Areas — Clearing associated with the parkway motor road and Old Agency Road Relocated in densely wooded areas in the western portion of the corridor (mixed hardwood and pine/oak forest) would interrupt the continuity of vegetation and the overhead tree canopy by creating a large, open swath.

The crossover road bridge would be located where the parkway alignment would follow a rise in the topography so that the bridge deck elevation would be slightly above the existing ground elevation, allowing for the construction of a low-profile bridge. The bridge would cross over the parkway perpendicularly, so a shorter bridge of 88.4 meters (290 ft.) could be constructed compared to alternative 5. The parkway would follow the existing grade where possible but could require additional clearing of forest area for cut slopes and some fill embankments at the bridge abutments (see the conceptual bridge sketch for the revised proposed action on page 15).

These clearing activities would result in a net loss of approximately 4.1 hectares (10.3 ac.) of mixed hardwood and pine/oak forest, an adverse, long term, moderate visual impact. Efforts would be made during construction to avoid clearing, and revegetation would screen adjacent development.

Open Fields — The intermingled late successional and agricultural fields within the eastern portion of the corridor provide an important visual contrast to the densely wooded areas within the western portion of the corridor. Construction of the parkway motor road and Old Agency Road Relocated would permanently change the contrasting scale of small open fields. A net total of approximately 5.9 hectares (14.6 ac.) of open fields would be affected. This would result in an adverse, long-term, major impact. Revegetation of open field areas would be inconsistent with their existing visual character. The contrast to the densely wooded areas provided by open fields would be permanently lost.

Views from and to the Parkway — Vegetative clearing required for construction would open views from and to the parkway motor road to residential development in the Windrush and Canterbury subdivisions to the north. Vegetative clearing for Old Agency Road Relocated would open views to the south from and to the Dinsmor subdivision and Greenwood Plantation. The revegetation of disturbed areas would screen some views, resulting in a short-term, moderate impact.

Where the parkway motor road passed under the crossover road between Old Agency Road Relocated and Old Agency Road, the parkway motor road would be placed in an approximately 1 meter (3 ft.) cut in an area of rising ground elevation. The bridge would be placed on a low earth fill and would cross the parkway motor road slightly above grade. Revegetation of these fill embankments and cut slopes would screen most views of the low bridge and parkway. The overall affect would be a short-term, moderate impact.

Visual Experience — The visual experience of users of both local roads and the parkway would be changed. For local travel views of historic and cultural sites, glimpses through dense woods to open fields, and the contrast of shaded and open sunlit fields would be affected. Traffic on a portion of the existing narrow, tree-canopied, two-lane Old Agency Road would be rerouted to the much wider Old Agency Road Relocated (see typical cross-sections on page 16). The loss of this visual experience would be a long-term, major impact.

The visual experience from the parkway motor road would change from the intermingled open fields in the eastern portion of the site since adjacent development might be visible to parkway users. However, the overall visual experience along the parkway would be enhanced because of completing this section of the parkway motor road and using consistent designs, as well as materials and details, resulting in long-term, major benefit to users.

Cumulative Impacts. The construction of a multi-use trail within the corridor would have a negligible impact on visual resources.

Conclusion. Impacts on densely wooded areas would be adverse, long term, and moderate. Impacts to open fields, which contribute to the character of the area, would be long term and major. Views from the parkway motor road of adjacent development, as well as views of Old Agency Road Relocated and the crossover road between Old Agency Road Relocated and Old Agency Road, would be moderate impacts pending the growth of revegetated disturbed areas. The revegetation of low embankments and cut slopes would help screen views of the bridge crossing the parkway motor road, resulting in a moderate visual impact. Changes to the visual experience for users of local roads would be an adverse, long-term, major impact. Completing this section of the parkway motor road, along with using consistent designs and details, would improve the overall visual continuity of the experience for parkway users, a long-term, major benefit.

Recreational Users and Facilities

Analysis. Completing this section of the parkway motor road, as described in the revised proposed action, would improve the continuity of the Natchez Trace Parkway, significantly enhancing the recreational driving experience for parkway travelers. This would fulfill the 1938 legislative mandate for completing the Natchez Trace Parkway and provide a long-term, major benefit.

Providing an access road under this alternative from the parkway motor road to a visitor parking area adjacent to the Choctaw Agency site would make it easier to provide interpretive and educational programs at the site. Programs could be offered to local residents as well as parkway users. This would result in a long-term, moderate benefit.

Cumulative Impacts. The construction of a multi-use recreational trail would accommodate nonmotorized recreational use and minimize conflicts between trail users and vehicular traffic on adjacent roadways. The trail could potentially connect with a network of other trails in the area, providing local residents as well as parkway travelers additional recreational opportunities, such as hiking and bicycling. This would be a long-term, moderate beneficial impact.

Conclusion. Completing this section of the Natchez Trace Parkway would improve the continuity of the recreational driving experience, a long-term, major benefit. Providing access to and parking at the Choctaw Agency site would make it easier to offer interpretive and educational programs, thus enhancing the experiences of parkway users and local residents. This would be a long-term, moderate benefit. The construction of a multi-use recreational trail would provide local residents, as well as parkway users, additional recreational opportunities, a long-term, moderate benefit.

Local Residents

Analysis. Actions that could affect local residents under this alternative include constructing the parkway motor road, Old Agency Road Relocated, and the crossover road between Old Agency Road Relocated and Old Agency Road (including a bridge over the parkway motor road), plus closing Old Agency Road to vehicular traffic and restoring it to Old Trace appearances from near Whippoorwill Lane to Richardson Road.

The primary concerns for local residents relate to impacts on the community character and residents' feelings of living away from developed urban areas, including privacy, seclusion, and minimal traffic congestion. Other impacts relate to convenient access to regional recreational facilities and access to local attractions, including high-quality schools in the area.

Community Character — The character along this part of the parkway corridor is changing from rural to suburban as a result of adjacent residential development. Clearing mature trees and understory vegetation to construct the parkway motor road, Old Agency Road Relocated, and the crossover road between Old Agency Road and Old Agency Road Relocated would affect the present character of the area. In addition, Old Agency Road Relocated with a higher speed and increased travel volumes would affect some adjacent homes along the northern edge of the Dinsmor subdivision, and it would affect the character of the entry to the subdivision for all residents. Excessive clearing would be limited. Some disturbed areas would be revegetated. Pending the maturing of revegetated areas, this loss of fully grown vegetation would be a short-term, moderate impact to seclusion and privacy

Restoring the closed section of Old Agency Road to historical appearances would increase the privacy and seclusion for residents in the Windrush subdivision along the northern edge of the project area.

The design standard for the new parkway motor road would introduce a lower speed urban roadway, with better safety standards and wide cleared areas that would be a major change from the existing narrow, low-speed, tree-canopied roads in the area. Over time additional residential developments would be built, especially to the west, and travel volumes would increase, particularly on Old Agency Road Relocated. Through-traffic would use Old Agency Road Relocated to access I-55 (via existing Old Agency Road) and urbanized areas to the east. Old Agency Road Relocated would introduce a higher speed roadway than exists with the original Old Agency Road; this could create safety concerns as traffic transitioned onto the original narrow roadway, a short-term, minor impact. The new roadways would have a short-term, moderate impact on the present character of the project area.

Community Qualities — Single-family residential communities are being planned and developed to the north and west of this section of the Natchez Trace Parkway. Because this area is being planned for higher-priced communities, residential subdivisions similar to existing ones would likely continue to be built in response to the regional market. High-quality schools would continue to serve existing and future subdivisions. Thus, there would be no effect on community qualities under this alternative.

Accessibility — Local residents would have approximately 0.4 kilometer (0.3 mi.) of additional out-of-direction travel between the Dinsmor subdivision and Richardson Road for access to local activities. This impact would be short-term and minor until local residents adjusted to the travel difference. Access to Greenwood Plantation and Brame Road would be from Old Agency Road Relocated along existing alignments. There would be a small amount of out-of-direction travel for drivers wanting to use Old Agency Road because access would be by way of the crossover road over the parkway. This would be a short-term, minor impact. Access to regional attractions would not be affected because the crossover road between Old Agency Road Relocated and Old Agency Road would provide access to I-55. (Emergency access is discussed under "Transportation / Traffic Impacts: Safety.")

Cumulative Impacts. The construction of a multi-use trail would offer additional recreational opportunities, possibly improving the quality of life for local residents.

Conclusion. Short-term, moderate impacts to the privacy and seclusion of local residents would occur from clearing mature vegetation and constructing urban standard roadways adjacent to residential subdivisions. A multi-use trail could improve the quality of life for local residents. The amount of out-of-direction travel for access to local activities would be a short-term, minor impact until local residents adjusted to the travel difference. Access to regional attractions would not be affected.

Noise

Analysis. The traffic noise that would result from the parkway motor road would increase noise levels throughout the project area and in adjacent residential subdivisions. The development of Old Agency Road Relocated and the closure of Old Agency Road west of Richardson Road to vehicular traffic would shift traffic traveling east-west through the project area to Old Agency Road Relocated. As a result, traffic noise would further increase near the Dinsmor subdivision, near Greenwood Plantation, and along Brame Road because of Old Agency Road Relocated (see table 13). Closing a portion of Old Agency Road would eliminate traffic along the southern portion of the Windrush subdivision.

TABLE 13: PROJECTED NOISE LEVELS, REVISED PROPOSED ACTION

Residential Area or Site	Noise Abatement Criteria (Leq)	Existing Conditions (dB(A))	2003 Projection (dB(A))	2020 Projection (dB(A))
East Windrush	67	47	48	51
West Windrush	67	41	48	52
East Dinsmor	67	42	50	53
West Dinsmor	67	44	51	54
Brame Road	67	37	46	50
Canterbury	67	51	52	53
Greenwood Plantation	67	36	44	47
Choctaw Agency Site	67	53	58	62

However, traffic-related noise levels would not decrease near Windrush or Canterbury, but rather slowly increase because of the parkway motor road. While the parkway motor road would cross under the crossover road in a 1 meter (3 ft.) depression, the effects on traffic noise would be minimal.

Negligible to minor increases in noise levels would occur in the short-term (1 to 8 dB(A)); minor to moderate increases would occur in the long term (2 to 13 dB(A)). The smallest increases would occur in the vicinity of the Canterbury and east Windrush subdivisions and the Choctaw Agency site because of the high volume of traffic noise that currently occurs in these areas. The largest increases would occur at the remaining sites — west Windrush, east and west Dinsmor, Brame Road, and Greenwood Plantation — because of the proximity of the new parkway motor road and Old Agency Road Relocated. By 2020 increased traffic volumes on these roads would result in moderate adverse impacts to these residential areas and properties (mostly on the project area's southern boundary) because of a potential 10 to 13 dB(A) increase in noise levels. This would be perceived as approximately double the existing noise levels. Although these increases would be long term, they would not exceed state noise guidelines (a 15 dB(A) increase). The highest noise level of 62 dB(A) at the Choctaw Agency site would also be below the FHWA noise abatement criteria for residential and park areas (67 dB(A)).

The construction of the parkway motor road, Old Agency Road Relocated, and the crossover road between Old Agency Road and Old Agency Road Relocated would result in adverse, short-term, minor noise impacts related to heavy equipment near residences in the Dinsmor subdivision and along Brame Road. Restoring Old Agency Road and other access roads to more natural conditions would also cause similar impacts. Generally, noise levels for construction vehicles with tires are 60 to 65 dB(A) at 100 feet or 40 to 45 dB(A) at 1,000 feet. Vehicles with tracks are approximately 10 dB(A) louder. Construction-related noise is exempt from the Ridgeland noise ordinance between 6 A.M. and 6 P.M.

Cumulative Impacts. Parkway projects occurring in the vicinity of the Highland Colony Parkway and to the east of the project area could create additional short-term noise during construction activities. These construction activities, in combination with the use of Old Agency Road Relocated and the parkway motor road, could cause increased noise levels both in the short and long term for residents on the eastern end of the project area. Construction activities on the western end of the project area would cause similar noise impacts for residents of the Dinsmor and Windrush subdivisions.

Conclusion. Noise levels would increase in the vicinity of the parkway motor road, Old Agency Road, and Old Agency Road Relocated. These increases would be negligible to minor in the short term and minor to moderate in the long term. By 2020 traffic volumes on the parkway motor road and Old Agency Road Relocated would result in a 10 to 13 dB(A) increase in noise levels, with the greatest increase in the vicinity of Brame Road. The highest noise level of 62 dB(A) would occur at the Choctaw Agency site because of the site's location near Old Agency Road and the parkway motor road. The maximum increase would not exceed state guidelines, and all noise levels would be less than the FHWA noise abatement criteria for residential and park areas (67 dB(A)).

Unavoidable Adverse Effects

The at-grade crossing of the Old Agency Road (Old Natchez Trace) by the parkway motor road would be an adverse, moderate effect as a result of truncating the historic Old Trace. Closing a 0.7 kilometer (0.4 mile) portion of Old Agency Road to vehicular traffic would adversely affect historical patterns of circulation and continuous use. Closing a portion of the historical Greenwood Plantation driveway would also be an adverse, moderate effect.

Approximately 0.7 hectare (1.7 ac.) of wetlands would be permanently filled to construct new roads; about 0.4 hectare (1.1 ac.) would be affected in two wetlands, a major adverse impact. Wetland 6 would be impacted to the greatest degree, with a 45% reduction due to the construction of the parkway motor road and Old Agency Road Relocated; approximately 26% of wetland 4 would be impacted. The remaining wetland impacts (approximately 0.3 hectare [0.6 ac.]) would occur in wetlands 8 and 9. This lost wetland acreage would be mitigated by restoring wetlands in another area (see the "Statement of Findings" in appendix E).

Actions in the revised proposed action would lead to long-term, adverse impacts on vegetation totaling approximately 10.0 hectares (24.9 ac.). This net loss accounts for vegetation that would be removed during construction and for areas where vegetation would be restored as mitigation.

New roads would traverse open fields and require clearing in densely wooded areas, resulting in long-term and major to moderate impacts on visual resources. Revegetating in some disturbed areas would screen adjacent development, resulting in short-term, moderate impacts to views to and from new roadways. Changes to the visual experience of users of local roads would be a long-term, major impact.

Short-term, adverse impacts on local residents would result from the intrusion of the parkway motor road, Old Agency Road Relocated, and the crossover road. The scale of the roadways near established residential subdivision would be a long-term, moderate impact.

Relationship of Short-term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity

The effects of construction on the parkway's natural and cultural resources and visitor services would be primarily short term and of moderate impact. The effects of revegetation, which would begin immediately following construction, would be clearly visible for a number of years, and wildlife temporarily displaced by construction would be expected to reoccupy parkway lands near the new roadways once construction had been completed.

Restoring a 0.7 kilometer (0.4 mi.) portion of the historic Old Natchez Trace and a portion of the driveway to Greenwood Plantation to historical appearances would be long-term impacts. Following construction, the National Park Service would continue to manage parkway lands to preserve natural and cultural resources and to provide visitor experiences and services consistent with resource management needs.

There would be short-term traffic disruption during construction. However, the long-term gain would be the construction of Old Agency Road Relocated and portions of new, safer, and improved roads connecting Brame Road and the Greenwood Plantation driveway. In addition, the construction of the parkway motor road would allow visitor experiences and services consistent with resource management needs.

Short-term impacts related to proposed construction would also include a negligible increase in both employment opportunities for construction workers and in revenues generated by construction activities for local businesses and government. Over the long term, however, the proposed development would have a negligible impact on the region's socioeconomic environment.

Irreversible and Irretrievable Commitments of Resources

Irreversible commitments of resources are those that cannot be reversed, except perhaps in the extreme long term. This would include, for example, the consumption or destruction of nonrenewable resources, such as minerals and old-growth forests or the extinction of a species.

Irretrievable commitments of resources are those that are lost for a period of time, as a resource is devoted to a use that simultaneously precludes other uses. For example, if facilities are developed in a forest, the timber productivity of the developed land is lost for as long as the facilities remain.

The revised proposed action would cause irretrievable impacts to historical patterns of circulation and use on a 0.7 kilometer (0.4 mi.) portion of Old Agency Road (Old Natchez Trace) that would be closed to vehicular traffic. The construction of the parkway motor road and Old Agency Road Relocated would result in the removal of a portion of the Greenwood Plantation driveway within the NPS right-of-way, irretrievably altering the historical approach to this property.

Under the revised proposed action 0.7 hectare (1.7 ac.) of wetlands would be impacted to construct new roads, and approximately 10 hectares (24.9 ac.) of vegetation would be lost. Wetlands and vegetation would be considered irretrievable commitments of resources in the project area. However, to mitigate the proposed impact to wetlands, wetland restoration is proposed at a minimum of one-to-one replacement (may be greater for forested wetlands; see the "Statement of Findings" in appendix E).

The revised proposed action would require minor amounts of fossil fuels, labor, and highway construction materials, such as aggregate and bituminous material. These resources are not in short supply, and their use would not have an adverse effect on the continued availability of these resources. Proposed construction would also result in an irretrievable expenditure of funds.

IMPACTS OF ALTERNATIVE 1: NO ACTION

Transportation / Traffic Impacts

Access

Analysis. Closing Old Agency Road from near Whippoorwill Lane to Richardson Road to vehicular traffic would increase the travel time for local drivers compared to existing conditions, creating an adverse, minor impact over the short and long term. The existing Old Agency Road would form a T intersection at Old Agency Road Relocated. This change in road alignment could have minor impacts to travel time but negligible impacts to access. The access to Richardson Road and the St. Andrew's School athletic fields from Old Agency Road would remain.

Impact Highlights of Alternative 1

- This is the only alternative that would not provide access to the Choctaw Agency site from the parkway motor road.
- Safety issues would occur for traffic transitioning from Old Agency Road to Old Agency Road Relocated and vice versa.
- The parkway motor road bridge would be similar in length to the bridge in alternative 5 (approximately 295 feet), but it would not be possible to screen views of the bridge with vegetation.
- Minor changes in the travel patterns of local drivers would be required because of new access roads to residential areas and other locations.
- Vegetation impacts would be less than any other alternative.

Changing access to the Dinsmor subdivision from Old Agency Road to Old Agency Road Relocated might shorten the travel distance slightly. The access drives for Greenwood Plantation and Brame Road would be combined into one access road intersecting Old Agency Road Relocated. Since traffic volumes are estimated to be low for both access points, the combination of access points should not affect travel time. The slight geometric changes would negligibly affect current movements and travel routes on these local roads.

No direct local access would be provided to the parkway motor road, with negligible effects to parkway traffic. No access would be provided from the parkway motor road to the Choctaw Agency site due to the proximity of the bridge for Old Agency Road Relocated.

Cumulative Impacts. Completing the parkway motor road through the project area would improve the continuity of interstate recreational travel for parkway users.

Conclusion. Impacts to access would be adverse, but minor. Travel would remain generally the same. Even though there would be slight geometric changes in road alignments, access would still be provided in all travel directions for each local road.

Volumes

Analysis. Approximately 10,000 vehicles per day would use Old Agency Road near Highland Colony Parkway. The majority of these vehicles (7,000 vpd) would remain on Old Agency Road west of the intersection with Old Agency Road Relocated to access the Windrush and Canterbury subdivisions. A smaller volume (3,000 vpd), consisting of through-traffic and local traffic, would shift to Old Agency Road Relocated.

Traffic volume on the parkway motor road would be about 7,200 vehicles per day on opening day, the same as the revised proposed action; volume could increase to approximately 18,000 vehicles per day in 2020 because of local growth in commuter traffic. However, if other local east-west routes were developed as proposed in local long-range transportation plans, this increase could be substantially less (see cumulative impacts).

Cumulative Impacts. As described for the revised proposed action, proposed long-range improvements in Ridgeland's *Transportation Plan Update* include constructing additional east-west transportation routes. Such routes would increase east-west traffic capacity for commuters, potentially minimizing the growth in commuter traffic along the parkway motor road through Ridgeland (including the project area).

Conclusion. Volume impacts would be beneficial and minor since local road alignments would be relocated and some traffic volume from Old Agency Road would be shifted to Old Agency Road Relocated. Only residents north of the project area would continue to use Old Agency Road east of the entrance to St. Andrew's School. Traffic volumes on the parkway on opening day would be approximately 7,200 vehicles.

Safety

Analysis. Relocating access to the Dinsmor subdivision should improve sight distance, thus reducing accident potential. The new intersection for Brame Road would have to be designed to accommodate adequate sight distances considering the curve in Old Agency Road Relocated and the parkway bridge. Reconfiguring the intersection at Richardson Road and Old Agency Road would reduce vehicular conflicts and improve safety. Mitigations to improve safety would include designing Old Agency Road Relocated to provide adequate sight distances for all approaches and to meet AASHTO design requirements. Improvements to the intersection and the relocated roadway should improve overall road safety. However, the existing portions of Old Agency Road that were not improved east of Richardson Road could still have safety issues due to the narrow cross-section, narrow lanes, uneven grade, and limited sight distance unless road improvements were made by the city of Ridgeland in cooperation with the National Park Service and the Mississippi Department of Archives and History. Emergency vehicle access times would remain basically unchanged.

Cumulative Impacts. No safety-related cumulative impacts were identified.

Conclusion. Safety impacts would be beneficial and moderate as a result of constructing new access roads and intersections with improved sight distances. Safety concerns along portions of Old Agency Road could remain unresolved unless addressed by the city of Ridgeland in cooperation with the National Park Service and the Mississippi Department of Archives and History. Emergency vehicle access times would remain basically unchanged.

Cultural Resource Impacts

Historic Resources

Analysis. As described for the revised proposed action, the parkway motor road crossing of the Old Natchez Trace would be approximately at grade, resulting in an adverse, moderate effect because of the physical disturbance associated with truncating the road segment. Restoring this portion to Old Trace appearances and interpreting it for the public would mitigate the adverse effect. Closing a 0.7 kilometer (0.4 mi.) portion of Old Agency Road to vehicular traffic from near Whippoorwill Lane to Richardson Road would substantially alter the road's historical patterns of circulation and continuous use, also an adverse, moderate effect.

As described for the revised proposed action, removing a portion of the Greenwood Plantation driveway within the NPS right-of-way would have an adverse, moderate effect as a result of irretrievably altering the historical approach to the property. To mitigate this effect, photo-documentation would provide an archival record of the driveway's current character-defining attributes. The National Park Service would work with the landowner to retain as much of the historical character of the property as possible and to screen the property from the parkway through the use vegetation.

Cumulative Impacts. As described for the revised proposed action, closing a portion of Old Agency Road (Old Natchez Trace) to vehicular traffic would represent an incremental loss of historical patterns of circulation and continuous use. While sections of Old Agency Road would remain open outside the project area, the experience of motorists driving along the extended road corridor would be substantially changed.

Conclusion. As described for the revised proposed action, the parkway motor road crossing of the Old Natchez Trace approximately at grade would truncate this segment of the trace, an adverse, moderate effect. Restoring a 0.7 kilometer (0.4 mi.) portion of Old Agency Road (Old Natchez Trace) to historical appearances and interpreting it would mitigate this effect. Closing a portion of Old Agency Road to vehicular traffic within the NPS right-of-way would substantially alter historical patterns of circulation and continuous use. Removing a portion of the Greenwood Plantation driveway would irretrievably alter the historical approach to this property.

Archeological Resources

Analysis. As described for the revised proposed action, the potential for inadvertent discoveries in the construction zone for the parkway motor road and Old Agency Road Relocated might be high because of their proximity to the Choctaw Agency site. While this site would be avoided by construction disturbance, archeological monitoring would be required during construction to ensure protection. Any inadvertent archeological discoveries would result in consultation with the Choctaw Nation in accordance with the memorandum of understanding that is being developed between the National Park Service and the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana.

This alternative would not specifically provide for parking and public interpretation of the Choctaw Agency site, so there would be no impacts related to visitation.

Other archeological sites in the project area are early to mid 20th century sites and have been determined ineligible for the National Register of Historic Places due to a lack of historical integrity and significance. Therefore, possible construction disturbance of these sites is not expected to adversely affect significant archeological information.

Cumulative Impacts. No cumulative impacts were identified.

Conclusion. The Choctaw Agency site would be avoided by construction disturbance. However, any inadvertent archeological discoveries during construction would be handled in accordance with a memorandum of understanding being developed with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana.

Natural Resources

Air Quality

Analysis. Peak-hour traffic volumes in alternative 1 for Old Agency Road west of Highland Colony Parkway are projected to be 788 vehicles in 2003 and 2,100 vehicles in 2020. Based on these volumes and speeds of 40 kph (25 mph), a CO screening test determined that the critical distance would be less than 3.1 meters (10 ft.) in 2003 and 5.9 meters (18 ft.) in 2020 (see table 14). Air quality impacts would be negligible.

TABLE 14: AIR QUALITY DATA SUMMARY, ALTERNATIVE 1

Year	Average Speed	Design-Hour Traffic Volumes	Critical Distance	Closest Receptor
2003	40 kph (25 mph)	788	<3.1 m (<10 ft.)	Approx. 30.5 m (100 ft.)
2020	40 kph (25 mph)	2,100	5.9 m (18 ft.)	Approx. 30.5 m (100 ft.)

Cumulative Impacts. Traffic volumes on other roadways throughout the project area would continue to increase as population increased. However, the cumulative effect of the combined traffic volumes are not expected to exceed national ambient air quality standards for carbon monoxide.

Conclusion. Like the revised proposed action, alternative 1 would have negligible impacts on air quality in both the short and long term, with no violations of national ambient air quality standards for carbon monoxide.

Soils

Analysis. As described for the revised proposed action, the parkway motor road, Old Agency Road Relocated, and new access routes would be constructed through soils classified as silt loams, which have low strength for streets and roads. Low strengths result because the subsoil and underlying clayey material shrinks and swells with seasonal changes in moisture and occasional flooding. Mitigations would be taken to reduce these effects (see page 31).

Soil erosion would result from the clearing of some vegetation from the project area, exposing project soils to erosive water and wind action. Some soils could be enhanced and improved with the removal of roads and the restoration of vegetation. A soil erosion control plan specifically designed for the selected alternative would be prepared and implemented during the construction phase, as described in "Mitigations for Special Resource Concerns" (see page 32).

Long-term and negligible impacts on project area soils would include excavation, the mixing of soil horizons, and the addition of aggregate fill and road surface pavement over existing soils. The exact amount of soil that would be excavated is unknown for each alternative; however, 10.5 hectares (25.8 ac.) of vegetation would be affected by this alternative, which is indicative of the surface acreage of soil that would be impacted by construction.

Cumulative Impacts. No cumulative impacts were identified under this alternative.

Conclusion. Long-term, negligible impacts would occur to soils due to excavation. Mitigation efforts would be undertaken to prevent soil erosion and to address the expansive characteristics of local soils.

Wetlands

Analysis. A total of 0.6 hectare (1.5 acres) of riverine and palustrine wetlands would be permanently filled as a result of constructing the parkway motor road, Old Agency Road Relocated, and developing new access roads to Brame Road and Greenwood Plantation from Old Agency Road Relocated. Table 15 identifies the potential adverse or beneficial impacts to wetland areas 1 through 10 (see "Affected Environment" for location).

Long-term adverse impacts would occur in wetland areas 2, 4, 6, and 8 because of the placement of fill to construct new roadbeds and shoulders. The remaining wetland areas (1, 3, 5, 7, 9, 10) would not

TABLE 15: WETLAND IMPACTS, ALTERNATIVE 1

Wetland	Size of Wetland Affected	Percentage of Wetland Area Affected	Impact Intensity and Direction
1	0	0	No impact
2	<0.01 ha (<0.01 ac.)	0.3	Negligible adverse
3	0	0	No impact
4 and 6	0.4 ha (1.1 ac.)	40	Major adverse
5	0	0	Minor beneficial
7	0	0	Minor beneficial
8	0.2 ha (0.4 ac.)	38	Major adverse
9	0	0	No impact
10	0	0	No impact

be adversely affected in the long term, although some short-term impacts, such as soil compaction and damage to wetland vegetation, could occur as equipment and workers constructed the new roads.

Less than 0.01 hectare or 0.01 acre (18.6 square meters [200 sq. ft.]) of wetland 2 would be potentially impacted by the parkway motor road along the wetland's northern border. Long-term impacts would be considered negligible because of the limited area that would be permanently occupied by road fill.

The new parkway motor road and Old Agency Road Relocated would cut through interconnected wetlands 4 and 6 in two areas, resulting in the long-term loss of approximately 0.4 hectare (1.1 ac.) of palustrine forested and shrub/scrub wetlands. The development of both roads would sever the wetland area into four or five separate areas and reduce the combined wetland area by 40%, resulting in a major adverse impact. Although the local hydrology could be maintained through the use of culverts, the loss and fragmentation of these wetland plant communities would impair their integrity. Removing Old Agency Road near the Windrush subdivision could improve the connectivity and health of the wetland; however, this gain would be negated by the development of the parkway motor road adjacent to the Old Agency Road restoration area.

Long-term adverse impacts to wetland 8 (which is southwest of Brame Road) would occur because the parkway motor road, Old Agency Road Relocated, and an access road from Old Agency Road Relocated to Brame Road would intersect and directly occupy this wetland in at least two locations. Approximately 0.2 hectare (0.4 ac.) of palustrine wetland would be permanently filled, resulting in a 38% loss of the wetland and further fragmentation of wetland plant communities. Removing and revegetating portions of Brame Road and the Greenwood Plantation driveway would eliminate current barriers between portions of wetlands 8 and 9, but the new roads would most likely minimize any beneficial effects.

In wetland areas 5 and 7 the removal of road surfaces, road fill, shoulders, and culverts could enhance the integrity and connectivity of wetland areas. Where roads were removed, disturbed areas outside the stream channels would be restored to the original contours and revegetated with native species. Stream channels could be returned to their natural state, and the local hydrology could be maintained or restored if necessary. Such restoration activities could result in minor to moderate beneficial impacts to the wetland systems.

Based on the NPS wetland protection guidelines *(DO 77-1: Wetland Protection)*, a statement of findings would be required to implement this alternative because wetland impacts would be long term and adverse. Suitable wetland restoration areas would need to be identified to provide a minimum of one-to-one replacement of the 0.6 hectare (1.5 ac.) of wetland adversely impacted by new road construction.

Cumulative Impacts. As described for the revised proposed action, a section of the parkway motor road must be constructed immediately to the west of project 3P13. This project (3P13-West) would result in an additional 0.6 hectare (1.5 ac.) of wetlands being permanently filled, and a separate statement of findings is being prepared. Combining the impact for the two projects would mean the long-term loss of 1.2 hectares (3.0 ac.) of wetlands, a major adverse impact in this area.

As described for the revised proposed action, the development of the multi-use trail could result in the additional loss of wetland acreage within and adjacent to the project area.

Conclusion. Approximately 0.6 hectare (1.5 ac.) of wetlands would be permanently filled to construct new roads. Negligible adverse impacts would occur to wetland area 2. Long-term major adverse impacts would occur in wetland areas 4, 6, and 8; each wetland area would be reduced in size approximately 35% to 40%, and the remaining sections would be fragmented. No adverse impacts would occur to the remaining wetland areas (1, 3, 5, 7, 9, and 10). The removal of roads could provide opportunities to improve wetland systems in areas 5 and 7.

The construction of the remaining sections of the parkway motor road to the west of the project area would result in an additional loss of 0.6 hectare (1.5 ac.) and a cumulative wetland impact of 1.2 hectares (3.0 ac.).

Water Quality

Analysis. As described for the revised proposed action, potential impacts to water quality from construction of the parkway motor road and Old Agency Road Relocated would occur in the same areas as described under "Wetland" impacts. Construction would cause short-term, negligible adverse impacts on the water quality of unnamed tributaries of White Oak Creek and Purple Creek.

Anticipated traffic volumes on the Natchez Trace Parkway and Old Agency Road Relocated would be less than 30,000 vehicles per day. Water quality impacts caused by vehicle-contaminated runoff would be long term, but negligible.

Water runoff from road surfaces, embankments, and other parkway elements would be directed through culverts and other water drainage structures. The local surface-water drainage patterns would not change, although stormwater discharge could increase, resulting in long-term, minor impacts. The restoration of a portion of Old Agency Road and of access roads within the project area would allow for the enhancement or possible reestablishment of historic drainage patterns.

Cumulative Impacts. No cumulative impacts were identified.

Conclusion. Short-term and negligible adverse impacts would occur to water quality caused by construction activity releasing soil and debris into unnamed streams. Anticipated traffic volumes on the Natchez Trace Parkway and Old Agency Road Relocated would be less than 30,000 vehicles per day; therefore, water quality impacts caused by vehicle-contaminated runoff would be long term, but negligible. Stormwater discharged into local streams could result in long-term, minor impacts from increased peak flows. The restoration of removed and relocated roads could benefit local hydrologic and drainage patterns.

Vegetation

Analysis. Constructing the parkway motor road, a bridge, and Old Agency Road Relocated would result in the loss of mature trees and understory due to clearing. Portions of the roadways would be located in previously undeveloped areas. Old Agency Road (from near Whippoorwill Lane to Richardson Road to) and portions of Brame Road and the Greenwood Plantation driveway within the project area would be removed. Old Agency Road would be restored to the appearance of the Old Natchez Trace, including a grass surface that would be kept mowed. The other removed roadways would eventually be revegetated with native plant materials and allowed to return to their natural state, replacing some of the vegetation lost to past and proposed road construction. Other actions that would be taken to minimize the amount of vegetation lost include avoidance of excessive vegetation clearing and the implementation of various erosion prevention measures.

Table 16 indicates the impacts by vegetation type. While individually these impacts would most likely be minor to moderate, collectively the loss of over 8.3 hectares of vegetation would be moderate to major because it would be permanent, highly noticeable, and substantial within the boundaries of the project area.

Mixed-Hardwood Forest — Approximately 0.8 hectare (2.0 ac.) of hardwood forest would be permanently lost in the western portion of the project area because of the parkway motor road, an adverse, long-term, minor impact. Short-term effects would also occur during construction, including the loss of some tree canopy and other understory vegetation.

Pine/Oak Forest — The construction of the parkway motor road and Old Agency Road Relocated with widths of roughly 30.5 m (100 ft.) would have long-term, major adverse impacts on pine/oak forest in the central portion of the project area (west of Brame Road) due to clearing. A total of 3.7 hectares (9.1 ac.) of forest would be cleared, a moderate to major impact. However, plans to remove approximately 0.5 hectare (1.2 ac.) of Brame Road and the current Greenwood Plantation driveway and to revegetate with native species would reduce the loss to 3.2 hectares (7.9 ac.).

Late Successional Fields — Late successional fields would be traversed by the parkway motor road and Old Agency Road Relocated in the central part of the project area. Approximately 4.2 hectares (10.2 ac.) would be affected. However, approximately 0.1 hectare (0.2 ac.) of existing roadway in these fields would be removed and revegetated, and approximately 1.5 hectares (3.6 ac.) of Old Agency Road would be restored to a grass surface. The net loss of these fields would be approximately 2.6 hectares (6.4 ac.), a minor to moderate effect.

Agricultural Fields — Agricultural fields would be traversed by the new parkway motor road and portions of Old Agency Road Relocated in the east end of the project area, resulting in the loss of approximately 1.8 hectares (4.5 ac.). Removing and revegetating a portion of Old Agency Road would reduce the total impact to 1.7 hectares (4.3 ac.). Impacts to these fields would be minor to moderate.

TABLE 16: VEGETATION IMPACTS, ALTERNATIVE 1

	Vegetation Loss for	Revegetation		
Vegetation Type	New Roads	Old Agency Road	Other Roads	Net Loss
Mixed Hardwood	0.8 ha (2.0 ac.)	*0.0*	*0.0*	0.8 ha (2.0 ac.)
Pine/Oak	3.7 ha (9.1 ac.)	*0.1 ha (0.3 ac.)*	*0.4 ha (0.9 ac.)*	3.2 ha (7.9 ac.)
Late Successional Fields	4.2 ha (10.2 ac.)	*1.5 ha (3.6 ac.)*	*0.1 ha (0.2 ac.)*	2.6 ha (6.4 ac.)
Agricultural Fields	1.8 ha (4.5 ac.)	*0.0*	*0.1 ha (0.2 ac.)*	1.7 ha (4.3 ac.)
Net Total	**10.5 ha (25.8 ac.)**	***1.6 ha (3.9 ac.)***	***0.6 ha (1.3 ac.)***	**8.3 ha (20.6 ac.)**

Note: italicized numbers represent areas restored or replanted with native vegetation.

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Cumulative Impacts. As described for the revised proposed action, additional vegetation impacts would occur as a result of constructing a multi-use trail and other parkway projects to the east and west. The cumulative vegetation impacts would be negligible on a local or regional scale.

Conclusion. Developing new roads would result in the loss of approximately 10.5 hectares (25.8 ac.) of vegetation during construction. Removing portions of Old Agency Road, Brame Road, and the Greenwood Plantation driveway would allow for the restoration or revegetation of approximately 2.2 hectares (5.2 ac.). The long-term impact would be moderate to major within the project area, with a net loss of 8.3 hectares (20.6 ac.) of vegetation. Constructing a multi-use trail within the project area, plus other parkway projects to the east and west, would cause a permanent cumulative loss of vegetation. Each vegetation type is common in this area, so the impact would be negligible.

Wildlife

Analysis. As described for the revised proposed action, loss of vegetation under this alternative could result in minor wildlife population decreases because of the potential loss of habitat. Other impacts relating to habitat fragmentation and isolation due to new roadway development would be the same as the revised proposed action. Potential losses of wildlife habitat, after revegetation of roads that were removed, would total 8.3 hectares (20.6 ac.).

Cumulative Impacts. Cumulative impacts would be the same as those described for the revised proposed action. Vegetation losses associated with a new multi-use trail could result in some minor local losses and fragmentation of wildlife habitat.

Conclusion. Wildlife impacts in the project area would be minor because regional wildlife populations would not be expected to decrease as a result of losing 8.3 hectares (20.6 ac.) of habitat. Ongoing development of adjacent parkway segments and a multi-use trail could cause minor cumulative effects to some wildlife species because of habitat loss and fragmentation.

Threatened or Endangered Species, or Species of Special Concern

Analysis. Only state-listed species of special concern are likely to be found in the project areas, as described for the revised proposed action. Short-term impacts could result in diminished habitat during construction due to vegetation clearing; long-term impacts could result after construction due to permanent habitat loss. For all state-listed species of concern the impacts were found to be either minor or negligible. Also as described for the proposed action, mitigation would include the preservation or replacement of vegetation that is important species' habitat. Sensitive resources identified within the parkway motor road corridor would also be regularly patrolled by NPS personnel.

Cumulative Impacts. No cumulative effects would occur because of the lack of habitat for special status species.

Conclusion. No federally listed species are found within the project areas. The potential loss of habitat would have negligible to minor effects on Mississippi species of special concern. Mitigation techniques would be employed to maintain habitat where important.

Socioeconomic Environment

Land Use

Analysis. *Consistency with Local Comprehensive Plans* — The development of the parkway motor road and Old Agency Road Relocated would be consistent with Ridgeland's *Year 2020 Comprehensive Plan* map, which shows the Natchez Trace Parkway and Old Agency Road Relocated through the project area. The closure of Old Agency Road from Richardson Road to Whippoorwill Lane to vehicular traffic would not be not consistent with the map, which shows Old Agency Road as a collector road from Highland Colony Parkway to Livingston Road. Highland Colony Parkway could be affected by a new intersection at Old Agency Road Relocated. Because access to the Choctaw Agency site from the parkway motor road would not be provided, this alternative, unlike the revised proposed action, would not complement the cultural and historical goals and policies identified in the *Comprehensive Plan.*

Consistency with Local Transportation Plans — The construction of the parkway motor road and Old Agency Road Relocated in alternative 1 would be consistent with *The Jackson Urbanized Area's Transportation Plan for the Year 2020,* and the *Transportation Plan Update for the City of Ridgeland.* The Jackson plan identifies the completion of the Natchez Trace Parkway from I-55 west through the project area; the Ridgeland plan identifies Old Agency Road Relocated in the next 5–10 years. Neither transportation plan indicates whether the existing segment of Old Agency Road through the project area would remain open or closed.

Planned Developments — Alternative 1 would not have direct impacts on the planned unit residential development at Brame Road and Highland Colony Parkway. The main access for the planned development would be by way of Highland Colony Parkway to the south, not Natchez Trace Parkway. Increased traffic on Brame Road could occur. Plans for an elderly care center near the entrance to the Dinsmor subdivision would not be affected. Access to the Dinsmor subdivision, Greenwood Plantation, and Brame Road from Old Agency Road Relocated would be provided, minimizing effects on local residents.

Cumulative Impacts. No cumulative impacts would result from implementing this alternative.

Conclusion. The construction of the parkway motor road and Old Agency Road Relocated through the project area would be beneficial because both actions are consistent with Ridgeland's *Year 2020 Comprehensive Plan, The Jackson Urbanized Area's Transportation Plan for the Year 2020,* and the *Transportation Plan Update for the City of Ridgeland.* The future use of Old Agency Road through the project area is not identified in either transportation plan. The closure of a portion of Old Agency Road would not be consistent with the *Comprehensive Plan* map. The lack of access to the Choctaw Agency site would be inconsistent with local cultural and historical goals and policies.

Visual Resources

Analysis. Under alternative 1 the following actions could affect visual resources: the construction of the parkway motor road, Old Agency Road Relocated, and a parkway bridge over Old Agency Road Relocated; plus the closure of Old Agency Road to vehicular traffic and its restoration to Old Trace appearances from near Whippoorwill Lane to Richardson Road.

Densely Wooded Areas — As described for the revised proposed action, clearing associated with the parkway motor road and Old Agency Road Relocated in the western portion of the corridor (west of

Brame Road) would affect densely wooded areas (mixed-hardwood and pine/oak forest), interrupting the continuity of vegetation and the overhead tree canopy by creating a large, open swath. Under this alternative the parkway bridge would cross over Old Agency Road Relocated on a 60-degree skew, necessitating a bridge approximately 90 meters (295 ft.) long, with additional clearing of forest area for fill embankments at the bridge abutments (see the conceptual bridge sketch for alternative 1 on page 19). There would be a total net loss of approximately 4.0 hectares (9.9 ac.) of densely wooded area for the parkway (including the bridge) and Old Agency Road Relocated. These actions would result in an adverse, long-term, moderate impact. Efforts would be made during construction to avoid clearing, and revegetation would occur where trees were removed to screen adjacent development.

Open Fields — Approximately 4.3 hectares (10.7 ac.) of open fields (agricultural and late successional fields) within the central and eastern portions of the project area would be affected by the construction of the parkway and Old Agency Road Relocated. This would constitute an adverse, long-term, major impact because the contrast to the densely wooded areas provided by open fields would be permanently lost. Revegetation of open field areas would be inconsistent with their existing visual character.

Views from and to the Parkway — To the north vegetative clearing for road construction would potentially open views of residential development in the Windrush and Canterbury subdivisions. To the south Old Agency Road Relocated would be seen from the Dinsmor subdivision and Greenwood Plantation. Revegetation of disturbed areas would partially screen most views from these areas, resulting in a short-term, moderate impact.

The parkway bridge over Old Agency Road Relocated would be sited on the edge of a lightly forested and open field area near Brame Road. Views of the bridge would intrude into the viewshed of the adjacent St. Andrew's School (entry from Old Agency Road). Extensive revegetation would be inconsistent with the open field character of the area, and it would not be possible to screen views of the bridge in this location. This would be a long-term, moderate impact.

Visual Experience — Similar to the revised proposed action, the visual experience for users would change. Closing a portion of Old Agency Road to vehicular traffic, along with modifying Brame Road and the Greenwood Plantation driveway, would substantially change this visual experience for local travelers. Traffic on the narrow, tree-canopied, two-lane Old Agency Road would be rerouted to the much wider Old Agency Road Relocated (see typical cross-sections on page 16). These would be long-term, major impacts.

The continuity of the visual experience along the whole parkway would be enhanced with the completion of this segment. Specifically, there would be visual continuity because the design, materials, and details would be the same as other segments of the parkway, a long-term, major benefit.

Cumulative Impacts. A multi-use trail has been approved for future construction within the project area. Trail construction would have a negligible impact on the existing visual character of the area.

Conclusion. Similar to the revised proposed action, the visual impacts of construction on densely wooded areas would be adverse, long term, and moderate; impacts to open fields would be long term and major. Views from the parkway motor road of adjacent development, as well as views of Old Agency Road Relocated, would be moderate impacts pending the growth of revegetated disturbed areas. Because of the location of the parkway bridge over Old Agency Road Relocated, it would not be possible to screen it with vegetation, resulting in a long-term, moderate impact. Changes to the visual experience for users of local roads would be adverse, long term, and major. Completing this segment of the parkway, along with using consistent designs and details, would improve the continuity of the viewer experience, a long-term, major benefit.

Recreational Users and Facilities

Analysis. Completing this 1.8 kilometer (1.1 mi.) section of the parkway motor road would improve the continuity of the Natchez Trace Parkway, significantly enhancing the recreational driving experience for parkway travelers. This would be a long-term, major benefit.

Under alternative 1 no access to the Choctaw Agency site would be provided from the parkway or other local roads, and no parking would be provided. This would make it difficult to offer interpretive programs at the site. This would result in a long-term, minor adverse impact.

Cumulative Impacts. A paved multi-use recreational trail (approximately 1.9 kilometers [1.2 mi.] in this section) would be designed to accommodate nonmotorized recreational use and to minimize conflicts between trail users and vehicular traffic on adjacent roadways. The trail could potentially connect to other trails in the area, providing local residents and parkway travelers additional recreational opportunities, such as hiking and bicycling. This would be a long-term, moderate benefit.

Conclusion. Completing this section of the parkway motor road would improve the continuity of the recreational driving experience on the Natchez Trace Parkway, as envisioned by the 1938 enabling legislation. This would be a long-term, major benefit. Not providing access to or parking at the Choctaw Agency site would make it difficult to offer interpretive or educational programs on site, this would be a long-term, minor adverse impact. A multi-use trail would provide additional recreational opportunities for local residents as well as parkway users, a long-term, moderate benefit.

Local Residents

Analysis. Under alternative 1 the following actions could affect local residents: the construction of the parkway motor road, Old Agency Road Relocated, and a parkway bridge over Old Agency Road Relocated; and the closure and restoration of Old Agency Road to Old Trace appearances from near Whippoorwill Lane to Richardson Road. As described for the revised proposed action, of concern to local residents are impacts on the community character and access to regional recreational facilities and attractions.

Community Character — The character of the existing community could be affected by clearing mature trees and understory vegetation to construct both the parkway motor road and Old Agency Road Relocated. This clearing and the proximity of Old Agency Road Relocated to the northern edge of the Dinsmor subdivision would directly affect some adjacent homes and the character of the entry to the subdivision for all residents. Some areas where existing vegetation would be removed for construction would be revegetated. Construction clearing would be limited. This loss of mature vegetation would be a short-term, moderate loss.

As discussed for the revised proposed action, closing a portion of Old Agency Road to vehicular traffic and restoring this section to Old Trace appearances would increase the privacy and seclusion for residents in the Windrush subdivision along the northern edge of the project area.

The design standards for the parkway would introduce a lower speed urban roadway (and a bridge) with improved safety standards and wide cleared areas, which would be a major change from the existing narrow, tree-canopied roads. Over time additional residential developments would be built, especially to the west, and travel volumes would increase, particularly on Old Agency Road Relocated. Old Agency Road Relocated would introduce a higher speed roadway than now exists on Old Agency Road, creating safety concerns as traffic transitions onto the original narrow roadway, a short-term, minor impact. Higher speed, through-traffic would use Old Agency Road Relocated to access I-55 (via existing Old Agency Road) and urbanized areas to the east. The new roadways and the parkway bridge would have a short-term, moderate impact on the present rural character of the corridor.

Community Qualities — Single-family residential communities are being planned and developed to the north and west. Because this area is being planned for higher-priced communities, similar residential subdivisions will likely continue to be built in response to the regional market. High-quality schools in the area would continue to serve existing and future residential subdivisions. Thus, there would be no effect on community qualities under this alternative.

Accessibility — Some modification of present access routes to local attractions requiring travel across the project area would occur. For example, to travel from the Dinsmor subdivision to Richardson Road there would be approximately 1.2 kilometers (0.7 mi.) of out-of-direction travel. Access to Greenwood Plantation and to Brame Road and Richardson Road would require approximately 0.3 kilometer (0.2 mi.) of additional out-of-direction travel. The impact of this out-of-direction travel would be short-term and minor until users became accustomed to the travel differences. Access to regional attractions would not be affected.

Cumulative Impacts. A multi-use trail has been approved for future construction within the project area. The trail would potentially enhance the quality of life for local residents.

Conclusion. Impacts on local residents from vegetative clearing, the intrusion of urban standard roadways, and the proximity of roadways to established residential subdivisions would be short term and moderate. The amount of out-of-direction travel for local access would be a short-term, minor impact until local travelers adjusted to the differences. There would be no impact on local accessibility to regional destinations via I-55, with direct connection by way of the Old Agency Road interchange. A multi-use trail would potentially improve the quality of life for local residents.

Noise

Analysis. Rerouting vehicular traffic from Old Agency Road (west of Richardson Road) to Old Agency Road Relocated in the southern portion of the project area would reduce current traffic noise near the Windrush subdivision and increase it near the Dinsmor subdivision. Noise levels would increase throughout the project area because of the proximity of new roads to residential areas and local sites, and because of the consistent background noise that would be generated along the parkway during peak traffic volumes. This would minimize potential noise decreases related to road removals.

As shown in table 17, negligible to minor increases in noise levels would occur in the short term (2–9 dB(A)); minor to moderate increases would occur in the long term (4–13 dB(A)). The smallest increases would occur in vicinity of the Choctaw Agency site, the Canterbury subdivision, and east Windrush because of the high volume of traffic noise that currently occurs in these areas. The largest increases would be in the Dinsmor and west Windrush subdivisions, along Brame Road, and at Greenwood Plantation because of the proximity of both the parkway motor road and Old Agency Road Relocated. By 2020 increased traffic volumes on these two roads would result in moderate adverse impacts because of a potential 10–13 dB(A) increase in noise levels. This would be perceived

TABLE 17: PROJECTED NOISE LEVELS, ALTERNATIVE 1

[illegible]	[illegible] Abatement Criteria Leq	Existing Conditions dB(A)	[illegible] Projection dB(A)	2020 Projection dB(A)
East Windrush	67	47	49	53
West Windrush	67	41	48	52
East Dinsmor	67	42	51	55
West Dinsmor	67	44	50	54
Brame Road	67	37	45	49
Canterbury	67	51	53	55
Greenwood Plantation	67	36	44	47
Choctaw Agency Site	67	53	58	61

as approximately double the existing noise levels. Although these increases would be long term, they would not exceed state noise guidelines (a 15 dB(A) increase). Similarly, the highest noise level of 61dB(A) at the Choctaw Agency site would be below FHWA noise abatement criteria for residential and park areas (67 dB(A)).

Construction activity would result in adverse short-term and minor noise impacts near residences in the Dinsmor subdivision and along Brame Road. Construction-related noise is exempt from the Ridgeland noise ordinance between 6 A.M. and 6 P.M.

Cumulative Impacts. Parkway projects occurring in the vicinity of the Highland Colony Parkway and to the east of the project area could create additional short-term noise during construction. These construction activities, in combination with the use of Old Agency Road Relocated and the parkway motor road, could cause increased noise levels both in the short and long term for residents on the eastern end of the project area. Construction activities on the western end of the project area would cause similar noise impacts for residents of the Dinsmor and Windrush subdivisions.

Conclusion. Noise levels would increase at all sites and residential areas in the vicinity of the parkway motor road, Old Agency Road, and Old Agency Road Relocated. These increases would be negligible to minor in the short term and minor to moderate in the long term. By 2020 traffic volumes on Old Agency Road Relocated and the parkway motor road would result in a 10 to 13 dB(A) increase in noise levels, with the greatest increase in the Dinsmor subdivision. The highest noise level of 61 dB(A) would occur at the Choctaw Agency site. The maximum increase would not exceed the state guidelines, and all noise levels would be less than the FHWA noise abatement criteria for residential and park areas (67 dB(A)).

Unavoidable Adverse Effects

As described for the revised proposed action, the parkway motor road crossing of the Old Natchez Trace approximately at grade would truncate this segment of the trace, an adverse, moderate effect. Closing a 0.7 kilometer (0.4 mile) portion of Old Agency Road (Old Natchez Trace) to vehicular traffic would adversely affect historical patterns of circulation and continuous use. The loss of a portion of the historical access to Greenwood Plantation would be an unavoidable adverse effect.

Approximately 0.6 hectare (1.5 ac.) of wetlands would be permanently filled to construct new roads. Long-term, major adverse impacts would occur in wetland areas 4, 6, and 8; each wetland area would be reduced in size approximately 35% to 40%, and the remaining sections would be fragmented. Actions under alternative 1 would lead to long-term adverse impacts on vegetation totaling approximately 8.3 hectares (20.6 ac.).

New roads would traverse open fields and require clearing in densely wooded areas, resulting in long-term and major to moderate impacts. Revegetating some disturbed areas would screen adjacent development, resulting in short-term, moderate impacts to views to and from new roadways. However, the parkway bridge over Old Agency Road Relocated would be in a lightly forested and open field area so it could not be screened by vegetation, resulting in a long-term, moderate impact. Changes to the visual experience for users of local roads would be a long-term, major impact.

Short-term, adverse impacts on local residents would result from the intrusion of the parkway motor road, Old Agency Road Relocated, and the parkway bridge into the present setting. The scale of the roadways and bridge, and the higher speed movement of increasing traffic volumes near established residential subdivisions, would be short-term, moderate effects.

Relationship of Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity

The effects of construction on natural and cultural resources and visitor services would be short term and moderate. The effects of revegetation, which would begin immediately following construction, would be clearly visible for one to two years, and wildlife temporarily displaced by construction would be expected to reoccupy parkway lands near the new roadway once construction had been completed.

Restoring a 0.7 kilometer (0.4 mi.) portion of the historic Old Natchez Trace to historical appearances and revegetating a portion of the historic driveway to Greenwood Plantation would be long-term impacts. Following construction, the National Park Service would continue to manage parkway lands to preserve natural and cultural resources and to provide visitor experiences and services consistent with resource management needs.

There would be short-term traffic disruption during construction. However, the long-term gain would be the construction of the parkway motor road, allowing visitors direct access to cultural resources and continued enjoyment of the parkway motor road.

Over the short-term proposed construction would result in a negligible increase in both employment opportunities for construction workers and in revenues generated by construction activities for local businesses and government. Over the long term, however, the proposed development would have a negligible impact on the region's socioeconomic environment.

Irreversible and Irretrievable Commitments of Resources

As described for the revised proposed action, closing a 0.7 kilometer (0.4 mi.) portion of the historic Old Natchez Trace would irretrievably change historical patterns of circulation and use. Constructing the parkway motor road and Old Agency Road Relocated would result in the removal of a portion of the Greenwood Plantation driveway within the NPS right-of-way, irretrievably altering the historical approach to this property.

Under alternative 1, 0.6 hectare (1.5 ac.) of wetlands would be permanently filled to construct new roads, and approximately 8.3 hectares (20.6 ac.) of vegetation would be lost. Wetland and vegetation losses would be considered irretrievable commitments of resources in the project area. However, if this alternative was implemented, a wetlands statement of findings would be prepared that would identify suitable wetland restoration areas for a minimum one-to-one replacement of impacted wetlands.

Alternative 1 would require minor amounts of fossil fuels, labor, and highway construction materials. These resources are not in short supply, and their use would not have an adverse effect on the continued availability of these resources. Proposed construction would also result in an irreversible commitment or expenditure of funds.

IMPACTS OF ALTERNATIVE 2

Transportation/Traffic Impacts

Access

Analysis. While additional access would be provided to Highland Colony Parkway by way of Old Agency Road Relocated, it would require out-of-direction travel for through-traffic and most local traffic. Short-term adverse impacts are expected as drivers adjusted to the new travel routes. The westbound travel time would be substantially increased for local residents of the Windrush and Canterbury subdivisions as well as the school, an adverse impact. Without access across the parkway, these drivers would have to backtrack to Highland Colony Parkway to access the new intersection. Through-traffic would also be inconvenienced by the detour along Highland Colony Parkway to the new intersection. Additional signing would be required to direct through-traffic to the new intersection and not onto the remaining dead-end segment of Old Agency Road.

The Dinsmor subdivision, Greenwood Plantation, and Brame Road residences would have direct access to Old Agency Relocated, which might shorten travel distances slightly and provide more convenient access. Access to St. Andrew's School and its athletic fields would remain from Old Agency Road. However, additional travel time could be required to access the school at this location if traveling from west or south of the study area.

No direct local access would be provided to the parkway motor road. A benefit of this alternative would be the addition of access from the parkway motor road to the Choctaw Agency site.

Cumulative Impacts. As described for the revised proposed action and alternative 1, completing the parkway motor road through the project area would improve the continuity of interstate recreational travel for parkway users.

Conclusion. Impacts to access would be adverse and major because some existing roads and travel patterns would be changed as a result of removing traffic from portions of Old Agency Road and developing Old Agency Road Relocated. Traffic from residential areas south of the project area and local east-west through-traffic on Old Agency Road would be diverted to Old Agency Road Relo-

Impact Highlights of Alternative 2

- Westbound through-traffic that currently uses Old Agency Road would be diverted to Old Agency Road Relocated, resulting in increased travel times for local drivers, particularly residents of the Windrush and Canterbury subdivisions, because they would have to use Highland Colony Parkway for north-south access.
- Old Agency Road Relocated would be constructed with improved safety features, providing safer travel for through-traffic and for residents of Dinsmor, Greenwood Plantation, and along Brame Road.
- No bridge would be required over the parkway motor road or other local roads; thus, visual impacts to parkway users and local residents would only result from the clearing of vegetation for new roads.

cated, resulting in out-of-direction travel and a short-term inconvenience for local drivers until they adjusted to new travel routes. Over the long term travel times would increase. However, access to all residential areas, roads, and other facilities surrounding the project area would continue to be provided.

Volumes

Analysis. The majority of the traffic (approximately 7,000 vehicles per day) would remain on Old Agency Road to access the Windrush and Canterbury subdivisions by way of Richardson Road. The smaller volume of through-traffic and local traffic from Dinsmor, Greenwood Plantation, and Brame Road (approximately 3,000 vehicles per day) would shift from Old Agency Road to Old Agency Road Relocated. Volumes on both roads are estimated at levels within the threshold for collector roadways.

Volumes on the parkway motor road would be the same as the revised proposed action and alternative 1. Approximately 7,200 vehicles per day are expected to use the parkway on opening day. The extent of future volume increases would depend on the development of additional east-west commuter routes in the vicinity.

Cumulative Impacts. As described for the revised proposed action and alternative 1, proposed long-range improvements in Ridgeland's *Transportation Plan Update* include constructing additional east-west transportation routes. The implementation of these plans by local or state agencies would increase east-west traffic capacity for commuters, potentially minimizing the growth in commuter traffic along the parkway motor road through Ridgeland (including the project area).

Conclusion. Impacts to traffic volumes on local roads in the project area would be beneficial and moderate, as existing traffic on Old Agency Road would be divided between Old Agency Road and Old Agency Road Relocated. Overall traffic volume on roads within the project area would remain the same. Approximately 7,200 vehicles would use the parkway motor road on opening day.

Safety

Analysis. A reconfigured intersection at Richardson Road and Old Agency Road would reduce vehicular conflicts, improving safety. East of Richardson Road, Old Agency Road would remain unimproved, and existing safety issues would remain. Closing the intersections to Greenwood Plantation and Brame Road from Old Agency Road would improve safety issues related to sight distance and conflicting traffic movements. Old Agency Road Relocated would be constructed to AASHTO standards. The sight distance, grading, and cross-section would be improved, reducing the potential for accidents on this new road section. There could be a minor adverse impact to emergency vehicle response times because of slightly farther travel distances for a few properties south of the parkway motor road. The improved design features of Old Agency Road Relocated could help reduce the impact of slightly longer travel distances for some emergency vehicle routes.

Cumulative Impacts. No safety-related cumulative impacts were identified.

Conclusion. Safety impacts would be beneficial and moderate because of road improvements. While Old Agency Road east and west of the closed portion would remain unimproved, Old Agency Road Relocated would be constructed with improved sight distance, grading, and shoulder width. Existing intersections on Old Agency Road would be closed or modified to reduce potential vehicular conflicts. Minor adverse impacts to emergency response times for a few properties south of the parkway could occur because of increased travel times, although the newly designed roads could counteract this impact.

Cultural Resource Impacts

Historic Resources

Analysis. As in the revised proposed action and alternative 1, the parkway motor road crossing of the Old Natchez Trace would be approximately at grade, resulting in an adverse, moderate effect because of the physical disturbance associated with truncating the road segment. Restoring this portion to Old Trace appearances and interpreting it for the public would mitigate the adverse effect. Closing a 0.7 kilometer (0.4 mi.) portion of Old Agency Road (Old Natchez Trace) to vehicular traffic from near Whippoorwill Lane to Richardson Road would alter the road's historical patterns of circulation and continuous use, an adverse, moderate effect.

Removing a portion of the Greenwood Plantation driveway within the NPS right-of-way would irretrievably alter the historical approach to this property, an adverse, moderate effect (similar to the revised proposed action and alternative 1). Photo-documentation would provide an archival record of the drive's current character-defining attributes. The National Park Service would work with the landowner to retain as much of the historical character of the driveway as possible.

Cumulative Impacts. As described for the revised proposed action and alternative 1, closing a 0.7 kilometer (0.4 mi.) portion of Old Agency Road (Old Natchez Trace) to vehicular use would represent an incremental loss of historical patterns of circulation and continuous use. While sections of Old Agency Road would remain open outside the NPS right-of-way, the current experience that motorists have as they drive along the extended road corridor would be substantially changed.

Conclusion. As described for the revised proposed action and alternative 1, the parkway motor road crossing of the Old Natchez Trace approximately at grade would truncate this segment of the trace, an adverse, moderate effect. Restoring a 0.7 kilometer (0.4 mi.) portion of Old Agency Road (Old Natchez Trace) to historical appearances and interpreting it for the public would mitigate this effect. Closing a portion of Old Agency Road to vehicular traffic within the NPS right-of-way would alter the road's historical patterns of circulation and continuous use. Removing a portion of the Greenwood Plantation driveway would irretrievably alter the historical approach to this property.

Archeological Resources

Analysis. As described for the revised proposed action and alternative 1, the potential for inadvertent discoveries of archeological resources in the motor road construction zone could be high because of its proximity to the Choctaw Agency site. While the Choctaw Agency site would be avoided, archeological monitoring would be required during construction to ensure protection. Any inadvertent archeological discoveries would result in consultation with the Choctaw Tribe in accordance with the memorandum of understanding that is being developed between the National Park Service and the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana.

As described for the revised proposed action, the National Park Service would ensure that adequate site security measures (including park patrols, surveillance, fencing, and educational outreach programs) were implemented before interpretive site development and public programs were initiated at the Choctaw Agency site. The access road would be designed to minimize disturbance to the cultural setting of the area. Providing direct access from the parkway motor road would allow the area to be more easily monitored.

Also as described for the revised proposed action, interpretive design and development for the Choctaw Agency site would be accomplished in consultation with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of Choctaw in Louisiana. These groups would also be consulted in the development of new parkway interpretive materials to ensure that they were accurate and inclusive of Native Americans' viewpoints.

Other archeological sites in the project area are early to mid 20th century and have been determined ineligible for the National Register of Historic Places due to the lack of historical integrity and significance, and no adverse effects on significant archeological information would be expected.

Cumulative Impacts. No cumulative impacts on archeological resources were identified.

Conclusion. The Choctaw Agency site would be avoided by construction. However, any inadvertent archeological discoveries during construction would be handled in accordance with a memorandum of understanding being developed with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana. The park would undertake appropriate site protection measures to avoid or mitigate potential adverse effects related to public visitation before opening the site to interpretation. The Choctaw and other tribal representatives would be contacted to help develop new interpretive materials for the parkway that were accurate and inclusive of Native Americans' viewpoints.

Natural Resources

Air Quality

Analysis. Impacts would be the same as the revised proposed action. Alternative 2 peak-hour traffic volumes for Old Agency Road between Richardson Road and Highland Colony Parkway are projected to be 788 vehicles in 2003 and 1,000 vehicles in 2020 (see table 18). Based on these volumes and speeds of 40 kph (25 mph), the CO screening test determined that the critical distance would be less than 3.1 meters (10 ft.) in both years 2003 and 2020. Air quality impacts would be negligible.

TABLE 18: AIR QUALITY DATA SUMMARY, ALTERNATIVE 2

Year	Average Speed	Design Hour Traffic Volumes	Critical Distance	Closest Receptor
2003	40 kph (25 mph)	788	<3.1 m (<10 ft.)	Approx. 30.5 m (100 ft.)
2020	40 kph (25 mph)	1,000	<3.1 m (<10 ft.)	Approx. 30.5 m (100 ft.)

Cumulative Impacts. Traffic volumes on other roadways throughout the project area would continue to increase as population increased. However, the cumulative effect of the combined traffic volumes would not be expected to exceed national ambient air quality standards for carbon monoxide.

Conclusion. Alternative 2 would have negligible impacts on air quality over the short and long term, with no violations of national ambient air quality standards for carbon monoxide.

Soils

Analysis. As described for the revised proposed action and alternative 1, mitigating measures would be taken where road alignments crossed soils classified as silt loams that have low strength for streets and roads. Soil erosion would result from the clearing of some vegetation from the project area, exposing project soils to erosive water and wind action. Some soils could be enhanced and improved with the removal of roads and the restoration of vegetation. A soil erosion control plan would be prepared and implemented during the construction phase, as described in the "Mitigations for Special Resource Concerns" (see page 32).

Long-term and negligible effects on project area soils would include excavation, the mixing of soil horizons, and the addition of aggregate fill and road surface pavement over existing soils. The exact amount of soil that would be excavated is unknown; however, under this alternative a total of 11.5 hectares (28.4 ac.) of vegetation would be affected, which is indicative of the surface acreage of soils that would be impacted by construction.

Cumulative Impacts. No cumulative impacts were identified under this alternative.

Conclusion. Long-term, negligible impacts would occur to project area soils due to excavation. Mitigation efforts would be undertaken to prevent soil erosion and to address the expansive characteristics of local soils.

Wetlands

Analysis. Impacts would be the same as those described for the revised proposed action. A total of 0.7 hectare (1.7 ac.) of riverine and palustrine emergent, scrub/shrub, and forested wetlands would be filled as a result of constructing the parkway motor road and Old Agency Road Relocated. Table 19 identifies the potential adverse or beneficial impacts to wetland areas 1 through 10. Impacts would be the same as described for alternative 1 except for wetlands 8 and 9.

Constructing Old Agency Road Relocated in the southern portion of the project area between Highland Colony Parkway and the Greenwood Plantation driveway (rather than curving north as in alternative 1) would fill wetland areas 8 and 9, resulting in moderate adverse impacts. Less than 0.1 hectare (0.2 ac.) in the very western section of wetland area 8 would be lost, reducing the size of the wetland but not its connectivity. Removing the current Greenwood Plantation driveway would provide opportunities to reduce the current fragmentation of the wetland. Approximately 0.2 hectare (0.4 ac.) of the far eastern end and a small portion of the western end of wetland area 9 (a long, linear palustrine wetland) would be filled, also impacting its overall size, but most likely not its connectivity or integrity.

TABLE 19: WETLAND IMPACTS, ALTERNATIVE 2

Wetland	Size of Wetlands Affected	Percentage of Wetland Area Affected	Impact Intensity and Direction
1	0	0	No impact
2	<0.01 ha (<0.01 ac.)	0.3	Negligible adverse
3	0	0	No impact
4 and 6	0.4 ha (1.1 ac.)	40	Major adverse
5	0	0	Minor beneficial
7	0	0	Minor beneficial
8	<0.1 ha (0.2 ac.)	15	Moderate adverse
9	0.2 ha (0.4 ac.)	13	Moderate adverse
10	0	0	No impact

Based on the NPS wetland protection guidelines *(DO 77-1: Wetland Protection),* a statement of findings would be required to implement this alternative because of adverse impacts to wetlands. Suitable wetland restoration areas would need to be identified to provide, at a minimum, a one-to-one functional replacement of wetlands adversely affected.

Cumulative Impacts. As described for the revised proposed action and alternative 1, an additional 0.6 hectare (1.5 ac.) of wetlands would be permanently filled just to the west of the project area. A separate statement of findings is being prepared for this project (3P13-West). The impacts of these two projects would total 1.3 hectares (3.2 ac.) of wetlands, an adverse, long-term, major impact.

As described for the revised proposed action and alternative 1, the construction of the multi-use trail in the project area could result in the additional loss of wetland acreage.

Conclusion. Approximately 0.7 hectare (1.7 ac.) of wetlands would be permanently filled to construct new roads. Long-term, major, adverse impacts would occur in wetland areas 4 and 6, as each wetland area would be reduced in size 35% to 40%, and the remaining wetland sections would be fragmented. Long-term, moderate, adverse impacts would occur to wetland areas 8 and 9 because of reduction in wetland size. Negligible adverse impacts would occur to wetland area 2. No adverse impacts would occur to wetland areas 1, 3, 5, 7, and 10. Removing portions of Old Agency Road and other access roads could provide opportunities to improve wetland systems 5 and 7.

Developing the remaining sections of the parkway motor road to the west of the project area would result in an additional loss of 0.6 hectare (1.5 ac.) and a cumulative wetland impact of 1.3 hectares (3.2 ac.).

Water Quality

Analysis. As described for the revised proposed action and alternative 1, potential impacts to water quality from constructing the parkway motor road and Old Agency Road Relocated would occur in the same areas as described under "Wetland" impacts. Construction would cause short-term, negligible adverse impacts on the water quality of the small, unnamed tributaries of White Oak Creek and Purple Creek.

Anticipated traffic volumes on the Natchez Trace Parkway and Old Agency Road Relocated would be less than 30,000 vehicles per day. Water quality impacts caused by highway runoff would be long-term, but negligible.

Water runoff from the road surfaces, embankments, and other parkway elements would be directed through culverts and other water drainage structures. The local surface-water drainage patterns would not change, although stormwater discharge could increase, resulting in long-term, minor impacts. The restoration of all or portions of Old Agency Road and of access roads within the project area would allow for the enhancement or possible reestablishment of historic drainage patterns.

Cumulative Impacts. No cumulative impacts were identified.

Conclusion. As described for the revised proposed action and alternative 1, short-term and negligible adverse impacts would occur to water quality as a result of construction activity releasing soil and debris into unnamed streams. Stormwater discharged into local streams could result in long-term, minor impacts from increased peak flows. The restoration of removed and relocated roads could benefit local hydrologic and drainage patterns.

Vegetation

Analysis. Vegetation impacts would vary slightly from the revised proposed action because there would be no crossover road or bridge associated with the parkway motor road. Similar to the revised proposed action and alternative 1, Old Agency Road (west of Richardson Road) would be restored to Old Trace appearances by removing the asphalt, grading the area, and planting with turf grass that would be kept mowed. Also, Brame Road and the Greenwood Plantation driveway would be removed and revegetated. The other removed roadways would be replanted with native vegetation and allowed to return to their natural state, replacing some of the vegetation lost in the past.

Impacts by vegetation type are identified in table 20. While individually these impacts would be most likely minor to moderate, collectively the loss of 9.5 hectares (23.6 ac.) of vegetation would be moderate to major because it would be permanent, highly noticeable, and substantial within the boundaries of the project area.

Mixed-Hardwood Forest — Impacts would be the same as the revised proposed action and alternative 1, a net minor effect of 0.8 hectare (2.0 ac.).

Pine/Oak Forest — A net impact of approximately 2.8 hectares (6.9 ac.) of pine/oak forest would be lost under this alternative.

Late Successional Field — Impacts would be the same as alternative 1, a net loss of 2.6 hectares (6.4 ac.) would occur.

Agricultural Fields — Long-term and short-term impacts to this vegetative type would be the same as the revised proposed action because of access and a parking lot at the Choctaw Agency site. The total net loss of this vegetative type would be 3.3 hectares (8.3 ac.)

Cumulative Impacts. As described for the revised proposed action and alternative 1, additional vegetation losses would occur within the project area because of a multi-use trail and other parkway projects to the east and west. The cumulative vegetation impacts would be negligible on a local or regional scale.

Conclusion. The development of new roads and a parking area would result in the loss of approximately 11.5 hectares (28.4 ac.) of vegetation. The removal of some roads, including portions of Old Agency Road, Brame Road, Dinsmor Crossing, and the Greenwood Plantation driveway, would allow the revegetation of approximately 2 hectares (4.8 ac.). The long-term impact would be moderate to major within the project area, with a net loss of 9.5 hectares (23.6 ac.) of vegetation. The construction of a multi-use trail within the parkway motor road and other parkway projects to the east and west would cause permanent cumulative losses of vegetation in the local area.

TABLE 20: VEGETATION IMPACTS, ALTERNATIVE 2

Vegetation Type	Vegetation Loss for New Roads	Revegetation		Net Loss
		Old Agency Road	Other Roads	
Mixed Hardwood	0.8 ha (2.0 ac.)	*0*	*0*	0.8 ha (2.0 ac.)
Pine Oak	3.2 ha (7.9 ac.)	*0.1 ha (0.3 ac.)*	*0.3 ha (0.7 ac.)*	2.8 ha (6.9 ac.)
Late Successional Fields	4.2 ha (10.2 ac.)	*1.5 ha (3.6 ac.)*	*0.1 ha (0.2 ac.)*	2.6 ha (6.4 ac.)
Agricultural Fields	3.3 ha (8.3 ac.)	*0*	*0*	3.3 ha (8.3 ac.)
Net Total	**11.5 ha (28.4 ac.)**	***1.6 ha (3.9 ac.)***	***0.4 ha (0.9 ac.)***	**9.5 ha (23.6 ac.)**

Note: italicized numbers represent areas restored or replanted with native vegetation.

Wildlife

Analysis. Loss of vegetation with this alternative could result in minor wildlife population decreases because of the potential loss of habitat. Other impacts relating to habitat fragmentation and isolation due to new roadway development would be the same as the revised proposed action and alternative 1. Potential long-term losses of wildlife habitat would total 9.5 hectares (23.6 ac.).

Cumulative Impacts. Cumulative impacts would be the same as the revised proposed action and alternative 1. Vegetation losses associated with a new multi-use trail could result in some minor losses and fragmentation of wildlife habitat.

Conclusion. Vegetation losses would result in a long-term potential decrease of 9.5 hectares (23.6 ac.) of potential wildlife habitat and minor impacts on wildlife populations. Local parkway and trail projects could also result in additional long-term and cumulative losses of wildlife habitat.

Threatened or Endangered Species, or Species of Special Concern

Analysis. Only state-listed species of special concern are likely to be found in the project area, as described in the revised proposed action and alternative 1. Short- and long-term impacts could result in diminished habitat during and after construction due to vegetation clearing. For all state-listed species of concern, the impacts were found to be either minor or negligible.

Cumulative Impacts. No cumulative effects would occur because of the lack of significant habitat for special status species (the same as the revised proposed action and alternative 1).

Conclusion. No federally listed species are found within the project areas. Impacts to Mississippi species of special concern would be negligible to minor because of the potential loss of habitat.

Socioeconomic Environment

Land Use

Analysis. *Consistency with Local Comprehensive Plans* — Impacts would be the similar to those described for the revised proposed action and alternative 1. The land use designations in Ridgeland's *Year 2020 Comprehensive Plan* would not be affected. Access to and from the various land uses identified in the plan, such as low-density residential, residential estate, and public/quasi-public, would remain.

The development of the parkway motor road and Old Agency Road Relocated would also be consistent with Ridgeland's *Year 2020 Comprehensive Plan* map. However, the closure of Old Agency Road to vehicular traffic from Richardson Road to near Whippoorwill Lane would not be consistent with the map, which shows Old Agency Road as a collector road from Highland Colony Parkway west to Livingston Road. Highland Colony Parkway is shown as a major arterial in the *Comprehensive Plan,* which would not be changed under this alternative. Highland Colony Parkway could be affected, however, by a new intersection at Old Agency Road Relocated. Alternative 2 would complement the cultural and historical goals and policies in the *Comprehensive Plan* by providing access to the Choctaw Agency site (the same as the revised proposed action).

Consistency with the Local Long-Range Transportation Plan — The impacts of alternative 2 would be the same as those for the revised proposed action and alternative 1. The development of both the parkway motor road and Old Agency Road Relocated in alternative 2 would be consistent with *The Jackson Urbanized Area's Transportation Plan for the Year 2020* and the *Transportation Plan Update for the City of Ridgeland.* Neither transportation plan indicates whether the existing segment of Old Agency Road through the project area would remain open or closed.

Planned Developments — Impacts would be the same as in the revised proposed action and alternative 1. There would be no direct impacts on the planned unit residential development at Brame Road and Highland Colony Parkway. Increased traffic on Brame Road from this development could occur. Plans for an elderly care center near the entrance to the Dinsmor subdivision would not be affected by this alternative. Providing access to the Dinsmor subdivision, Greenwood Plantation, and Brame Road from Old Agency Road Relocated would minimize effects on local residents.

Cumulative Impacts. No cumulative impacts would result from implementing this alternative.

Conclusion. Constructing the Natchez Trace Parkway and Old Agency Road Relocated through the project area would be beneficial because both actions are consistent with Ridgeland's *Year 2020 Comprehensive Plan, The Jackson Urbanized Area's Transportation Plan,* and the *Transportation Plan Update for the City of Ridgeland.* The future use of Old Agency Road through the project area is not identified in either transportation plan. Closing a portion of Old Agency Road to vehicular traffic would not be consistent with the *Comprehensive Plan* map. In contrast, providing access to the Choctaw Agency site from the parkway would complement the *Comprehensive Plan's* cultural and historical goals.

Visual Resources

Analysis. Actions in alternative 2 that could affect visual resources include the construction of the parkway motor road and Old Agency Road Relocated, plus the closure and restoration of Old Agency Road to Old Trace appearances from near Whippoorwill Lane to Richardson Road. Techniques for mitigating visual impacts would include preserving vegetation and natural landforms and the revegetation of areas disturbed by construction.

Densely Wooded Areas — Clearing mixed-hardwood and pine/oak forests for the parkway and Old Agency Road Relocated would have impacts similar to those described for the revised proposed action and alternative 1, though slightly less because there would be no bridge in alternative 2. There would be a net loss of approximately 3.6 hectares (8.9 ac.) of densely wooded area, an adverse, long-term, moderate impact.

Open Fields — Approximately 5.9 hectares (14.7 ac) of open fields (agricultural and late successional fields) would be affected under this alternative, similar to the revised proposed action. As previously described, these open fields provide an important visual contrast to densely wooded areas, and they would be permanently lost, an adverse, long-term, major impact. Revegetation would be inconsistent with their existing visual character.

Views from and to the Parkway — Vegetation clearing required for constructing the parkway motor road would potentially open views to and from the Windrush and Canterbury subdivisions. However, there would be no bridge under this alternative, and views from St. Andrew's School (entry from Old Agency Road) would not be affected. Revegetation of disturbed areas would screen some views, resulting in a short-term, moderate impact.

Visual Experience — As described for the revised proposed action and alternative 1, the current visual experience would be affected by constructing the parkway motor road and Old Agency Road Relocated and by closing portions of Old Agency Road, Brame Road, and the Greenwood Plantation driveway. Traffic on the narrow, tree-canopied, two-lane Old Agency Road would be rerouted to the much wider Old Agency Road Relocated (see typical cross-sections on page 16). The loss of this visual experience would be a long-term, major impact.

Completing this section of the parkway motor road, along with using a consistent design and details, would enhance the continuity of the visual experience for parkway users, a long-term, major benefit.

Cumulative Impacts. A multi-use trail within the project area would have a negligible impact on visual resources.

Conclusion. Similar to the revised proposed action and alternative 1, the visual impact of clearing in densely wooded areas would be adverse, long term, and moderate; the visual impact on open fields would be long term and major. Views from the parkway motor road of adjacent development, and views of Old Agency Road Relocated from adjacent development, would be moderate impacts pending the growth of revegetated disturbed areas. Changes to the visual experience for users of local roads would be an adverse, long-term, and major impact. Completing this segment of the parkway, along with using consistent designs and details, would improve the continuity of the viewer experience, a long-term, major benefit.

Recreational Users and Facilities

Analysis. As described for the revised proposed action and alternative 1, completing this section of the parkway motor road would improve the continuity of the Natchez Trace Parkway, significantly enhancing the recreational driving experience for parkway travelers, a long-term, major benefit.

Under alternative 2 providing access to a visitor parking area adjacent to the Choctaw Agency site would allow interpretive and educational programs to be offered to local residents, as well as parkway users. This would result in a long-term, moderate benefit.

Cumulative Impacts. As described for the revised proposed action and alternative 1, the construction of a multi-use recreational trail would accommodate nonmotorized recreational use and minimize conflicts between trail users and vehicular traffic on adjacent roadways. The trail could potentially connect with a network of other trails in the area, providing local residents as well as parkway travelers additional recreational opportunities, such as hiking and bicycling. This would provide a long-term, moderate benefit.

Conclusion. As described for the revised proposed action and alternative 1, completing this section of the Natchez Trace Parkway would improve the continuity of the recreational driving experience, a long-term, major benefit. Access to and parking at the Choctaw Agency site would make it easier to offer interpretive and educational programs, a long-term, moderate benefit. A multi-use recreational trail would provide local residents as well as parkway users additional recreational opportunities, a long-term, moderate benefit.

Local Residents

Analysis. Under alternative 2 the following actions could affect local residents: the construction of the parkway motor road and Old Agency Road Relocated, and the closure and restoration of Old Agency Road to Old Trace appearances between Whippoorwill Lane and Richardson Road. As a result, this alternative would have different impacts because there would be no parkway motor road bridge over Old Agency Road Relocated and no link between existing Old Agency Road and Old Agency Road Relocated for local travel across the project area.

Community Character — Impacts would be the same as the revised proposed action and alternative 1, except that because there would be no parkway bridge over Old Agency Road Relocated, the impact of new urban roadway elements on the character in the Brame Road area and Greenwood Plantation would be reduced. The introduction of Old Agency Road Relocated and its increased level of activity would be a short-term, moderate adverse impact.

Community Qualities — As described for the revised proposed action and alternative 1, there would be no effect on community qualities under this alternative.

Accessibility — Because Old Agency Road Relocated would not connect to existing Old Agency Road within the project area, existing routes that provide access to local activities across the corridor would have to be modified. For example, crossing from the Dinsmor subdivision to Richardson Road would require approximately 2.2 kilometers (1.4 mi.) of additional out-of-direction travel (requiring the use of Highland Colony Parkway). This would be a short-term, minor adverse effect until local users became accustomed to the travel difference.

Local access to regional attractions from I-55 would be affected because Old Agency Road Relocated would terminate at Highland Colony Parkway, without a direct connection to I-55 (requiring the use of Highland Colony Parkway to the Old Agency Road intersection). This break in direct access to I-55 would be a long-term, moderate effect on regional accessibility.

Cumulative Impacts. As described for alternative 1, the construction of a multi-use trail within the project area would potentially improve the quality of life for local residents.

Conclusion. As described for the revised proposed action and alternative 1, impacts on the community setting from the clearance of vegetation, the intrusion of urban standard roadways, and the proximity of roadways to established residential subdivisions would be short term and moderate. Under alternative 2 long-term, moderate adverse impacts on local access to regional attractions would occur without direct access to I-55 from Old Agency Road Relocated. Increased out-of-direction travel for local access across the project area would be a short-term, minor impact. A multi-use recreational trail could improve local residents' quality of life.

Noise

Analysis. Similar to the revised proposed action and alternative 1, the predominant source of noise in the project area would be the parkway motor road; therefore, noise levels in all adjacent residential areas and at the Choctaw Agency site would increase compared to current conditions. Potential noise increases are presented in table 21. Because Old Agency Road Relocated would be south of the Choctaw Agency site rather than adjacent to it, future noise levels at the site would be less than under alternative 1. Negligible to minor increases in noise levels would occur in the short term (2–9 dB(A)); minor to moderate increases would occur in the long term (4–13 dB(A)). The smallest increases

TABLE 21: PROJECTED NOISE LEVELS, ALTERNATIVE 2

Residential Area or Site	Noise Abatement Criteria (Leq)	Existing Conditions (dB(A))	2003 Projection (dB(A))	2020 Projection (dB(A))
East Windrush	67	47	49	53
West Windrush	67	41	48	52
East Dinsmor	67	42	51	55
West Dinsmor	67	44	50	54
Brame Road	67	37	46	49
Canterbury	67	51	53	55
Greenwood Plantation	67	36	44	47
Choctaw Agency Site	67	53	57	59

would occur in the vicinity of the Choctaw Agency site, Canterbury subdivision, and east Windrush subdivision. The largest increases would occur in the Dinsmor and west Windrush subdivisions, along Brame Road, and at Greenwood Plantation because of the proximity of both the parkway motor road and Old Agency Road Relocated. The greatest increase in noise level (13 dB(A) at east Dinsmor) would not exceed state guidelines. Similarly, the highest noise level of 59dB(A) at the Choctaw Agency site would be below FHWA noise abatement criteria for residential and park areas (67 dB(A)).

As described for the revised proposed action and alternative 1, construction noise would occur in the short term, but is allowed during daytime hours (6 A.M. to 6 P.M.), according to city noise ordinances.

Cumulative Impacts. Cumulative impacts would be the same as the revised proposed action and alternative 1. Additional construction-related noise could occur due to construction projects.

Conclusion. Similar to the revised proposed action and alternative 1, noise levels would increase at all sites and residential areas in the vicinity of the parkway motor road, Old Agency Road, and Old Agency Road Relocated. These increases would be negligible to minor in the short term and minor to moderate in the long term. Under this alternative the maximum increase in long-term noise levels would be 13 dB(A) near the Dinsmor subdivision, and the highest noise level of 59 dB(A) would occur at the Choctaw Agency site in 2020. The maximum increase would not exceed the state guidelines, and all noise levels would be less than the FHWA noise abatement criteria for residential and park areas (67 dB(A)).

Unavoidable Adverse Effects

Impacts to access would be adverse and major. Access for the westbound through-traffic would be relocated.

As described for the revised proposed action and alternative 1, the parkway motor road crossing of the Old Natchez Trace approximately at grade would truncate this segment of the Old Trace, an adverse, moderate effect. Closing a 0.7 kilometer (0.4 mi.) portion of Old Agency Road (Old Natchez Trace) to vehicular traffic would adversely affect historical patterns of circulation and continuous use. The loss of a portion of the historical Greenwood Plantation driveway would also be an unavoidable adverse effect.

Approximately 0.7 hectare (1.7 ac.) of wetlands would be permanently filled. Major long-term adverse impacts would occur in wetland areas 4 and 6, as each wetland area would be reduced in size approximately 35% to 40%, and the remaining wetland sections would be fragmented. Net vegetation losses under this alternative would total approximately 9.5 hectares (23.6 ac.).

New roads would traverse open fields and require clearing in densely wooded areas, resulting in long-term and major to moderate impacts on these visual resources. Revegetating in some disturbed areas would screen views of adjacent development, resulting in short-term, moderate impacts to views to and from new roadways. Changes to the visual experience of users of local roads would be a long-term, major impact.

Short-term, adverse impacts on local residents would result from the intrusion of the parkway motor road and Old Agency Road Relocated into the present setting. The scale of the roadways and bridge, and the higher speed movement of increasing traffic volumes near established residential subdivisions, would be short-term, moderate effects.

Relationship of Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity

The effects of construction on the parkway's natural and cultural resources would be primarily short term and of moderate impact. The effects of revegetation, which would begin immediately following construction, would be clearly visible for one to two years, and wildlife temporarily displaced by construction would be expected to reoccupy parkway lands near the new roadway once construction was complete.

There would be long-term impacts to a 0.7 kilometer (0.4 mi.) portion of the historic Old Natchez Trace and the historic driveway to Greenwood Plantation as a result of closing these roads and restoring the former to Old Trace appearances and revegetating the latter. Following construction, the National Park Service would continue to manage parkway lands to preserve the natural and cultural resources and to provide visitor experiences and services consistent with resource management needs.

There would be short-term traffic disruption during construction. However, the long-term gain would be the construction of the parkway motor road, allowing visitors direct access to cultural resources and other opportunities.

As described for the revised proposed action and alternative 1, short-term impacts related to proposed construction would also include a negligible increase in both employment opportunities for construction workers and in the revenues generated by construction activities for local businesses and government. Over the long term, however, the proposed development would have a negligible impact on the region's socioeconomic environment.

Irreversible and Irretrievable Commitments of Resources

As described for the revised proposed action and alternative 1, this alternative would cause irretrievable major adverse impacts to historical circulation patterns on a 0.7 kilometer (0.4 mi.) portion of Old Agency Road (Old Natchez Trace) that would be closed to vehicular use. Construction of the parkway motor road and Old Agency Road Relocated would result in the removal of a portion of the Greenwood Plantation driveway within the NPS right-of-way, irretrievably altering the historic approach to this property.

Approximately 0.7 hectare (1.7 ac.) of wetlands would be permanently filled to construct new roads. Net vegetation losses under this alternative would total approximately 9.5 hectares (23.6 ac.). Vegetation and wetland losses would be considered irretrievable commitments of resources in the project area. However, if this alternative was implemented, a statement of findings for wetlands would be prepared that would identify suitable wetland restoration areas for a minimum one-to-one replacement of impacted wetlands.

This alternative would require minor amounts of fossil fuels, labor, and highway construction materials, such as aggregate and bituminous material. These resources are not in short supply, and their use would not have an adverse effect on the continued availability of these resources. The proposed construction would also result in an irretrievable commitment of funds.

IMPACTS OF ALTERNATIVE 3

Transportation/Traffic Impacts

Access

Analysis. Traffic to and from the Windrush and Canterbury subdivisions and St. Andrew's School, as well as through-traffic, would all be rerouted to the new intersection at Old Agency Road Relocated and Highland Colony Parkway. Substantial adverse, short-term impacts would be expected while drivers adjusted to the new route. Over the long term travel time is expected to increase, and there could be additional delays. Traffic to and from the Dinsmor subdivision, Greenwood Plantation, and Brame Road residences would have direct access to Old Agency Road Relocated, which could shorten the travel distance slightly and provide more direct, convenient access. The secondary access for St. Andrew's School would be closed or possibly maintained as "deed reserved" access; primary access would continue to be provided on Highland Colony Parkway. Access to the athletic fields would be provided via an extended driveway from Richardson Road. This would create a slight detour from the previous travel pattern for some drivers.

Like the other alternatives, no direct local access would be provided to the parkway motor road. As described for alternative 2, a benefit of this alternative would be the addition of access from the parkway motor road to the Choctaw Agency site.

Cumulative Impacts. Completing the parkway motor road through the project area would improve the continuity of interstate recreational travel for parkway users.

Impact Highlights of Alternative 3

- All Old Agency Road traffic from just east of Whippoorwill Lane to Highland Colony Parkway would be rerouted to Old Agency Road Relocated, resulting in major improvements to safety and capacity.
- Major changes would occur in eastbound travel patterns for Windrush and Canterbury residents and for through-traffic because traffic would be rerouted south along Old Agency Road Relocated to Highland Colony Parkway. Traffic would then go north to Jackson Street or other eastbound streets.
- Under this alternative the longest portion of Old Agency Road (Old Natchez Trace) would be restored to Old Trace appearances.
- The parkway motor road bridge over the Richardson Road extension would be the shortest of any alternative. The bridge would be in a mixed forest / open field area.

Conclusion. Impacts to access would be adverse and major because existing roads and travel patterns would be changed by rerouting all traffic from Old Agency Road to Old Agency Road Relocated in the project area. Traffic from residential areas both north and south of the project area and local east-west through-traffic on Old Agency Road would be rerouted to Old Agency Road Relocated, resulting in out-of-direction travel and inconvenience for local drivers until they adjusted to the new travel routes. Over the long term travel times would be increased; however, access to all residential areas, schools, and other facilities surrounding the project area would continue to be provided.

Volumes

Analysis. Traffic associated with the Canterbury subdivision and St. Andrew's School could benefit from the closure of Old Agency Road and the elimination of traffic along the property boundaries. Traffic now using Old Agency Road (approximately 10,000 vehicles per day) would be completely shifted to Old Agency Road Relocated, which would be designed to better accommodate this volume. Richardson Road would be extended, crossing under the parkway motor road; this extension would also be designed as a collector road to accommodate higher volumes of traffic related to the Windrush and Canterbury subdivisions, approximately 7,000 vehicles per day.

Volumes on the parkway motor road would be the same as the revised proposed action and alternatives 1 and 2. Approximately 7,200 vehicles per day are expected on the parkway on opening day.

Cumulative Impacts. As described for the revised proposed action and alternatives 1 and 2, proposed long-range improvements in Ridgeland's *Transportation Plan Update* include constructing additional east-west transportation routes. The implementation of these plans by local or state agencies would increase east-west traffic capacity for commuters, potentially minimizing the growth in commuter traffic along the parkway motor road through Ridgeland (including the project area).

Conclusion. Impacts to traffic volumes in the project area would be beneficial and major because all traffic on Old Agency Road would be rerouted to Old Agency Road Relocated, a substantially safer and better designed roadway. Traffic volumes on the parkway on opening day would be approximately 7,200 vehicles.

Safety

Analysis. From the standpoint of alignment and geometric considerations, safety would be substantially improved under alternative 3 because Old Agency Road would be closed to vehicles from near Whippoorwill Lane to Highland Colony Parkway. As a result, all through-traffic would be displaced to Old Agency Road Relocated, alleviating a number of safety concerns identified by the Federal Highway Administration. The new road would be constructed to meet appropriate design standards. Adequate sight distances, improved grade, and ample shoulder width should reduce the accident rate compared to existing conditions. Mitigating measures to improve safety would include designing the intersection of Richardson Road and Old Agency Road Relocated to provide adequate sight distances. Increased safety would be a beneficial, major impact.

Emergency vehicle response times would increase to properties using Richardson Road in this area, since some out-of-direction travel would be required. Even though this would not be a long distance, most properties in the project area would be affected, a moderate impact.

Cumulative Impacts. No cumulative impacts on safety were identified.

Conclusion. Impacts would be beneficial and major because vehicular traffic would be removed from Old Agency Road within the project area. All traffic would be rerouted to Old Agency Road Relocated, which would be constructed to current safety standards. Emergency vehicle response times would increase for many residents in the vicinity of the project, particularly for those north of the parkway.

Cultural Resource Impacts

Historic Resources

Analysis. Like the previous alternatives, the parkway motor road would cross the Old Natchez Trace approximately at grade, resulting in an adverse, moderate effect because it would truncate the Old Trace. Restoring the closed road segment to historic Old Trace appearances and interpreting it for visitors would mitigate the adverse effect. Under this alternative 1.4 kilometers (0.9 mi.) of Old Agency Road would be closed to vehicular traffic, from Whippoorwill Lane to Highland Colony Parkway, adversely affecting historical patterns of circulation and continuous use. This would be the longest closure of any alternative, an adverse, moderate effect.

Removing a portion of the Greenwood Plantation driveway within the NPS right-of-way would have an adverse, moderate effect, as described for the previous alternatives, because it would irretrievably alter the historical approach. Photo-documentation would provide an archival record of the drive's current character-defining attributes and mitigate the loss. The National Park Service would work with the landowner to use vegetation to screen the property from the parkway motor road.

Cumulative Impacts. Similar to the revised proposed action and alternatives 1 and 2, closing a portion of Old Agency Road (Old Natchez Trace) to vehicular traffic would represent an incremental loss of historical patterns of circulation and continuous use. While sections of Old Agency Road would remain open outside the project area, the experience of motorists as they drove along the extended road corridor would be substantially changed.

Conclusion. As described for the previous alternatives, the parkway motor road crossing of the Old Natchez Trace approximately at grade would truncate this segment of the trace, an adverse, moderate effect. Restoring a 1.4 kilometer (0.9 mi.) portion of Old Agency Road (Old Natchez Trace) to historical appearances and interpreting it would mitigate this effect. The portion of Old Agency Road within the NPS right-of-way that would be closed to vehicular traffic would be longer than any other alternative, altering the road's historical patterns of circulation and continuous use. Removing a portion of the Greenwood Plantation driveway would irretrievably alter the historical approach to this property.

Archeological Resources

Analysis. As described for the revised proposed action and alternatives 1 and 2, the potential for inadvertent discoveries of archeological resources in the construction zone could be high because of its proximity to the Choctaw Agency site. While the Choctaw Agency site would be avoided by construction, archeological monitoring would be required during construction to ensure protection. Any inadvertent archeological discoveries would result in consultation with the Choctaw Tribe in accordance with the memorandum of understanding that is being developed between the National Park Service and the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana.

As described for the revised proposed action and alternative 2, the National Park Service would ensure that adequate site security measures (including park patrols, surveillance, fencing, and educational outreach programs) were implemented before interpretive site development and public programs were initiated at the Choctaw Agency site. The access road would be designed to minimize disturbance to the cultural setting of the area. Providing direct access from the parkway motor road would allow the area to be more easily monitored.

Also as described for the revised proposed action and alternative 2, interpretive design and development for the Choctaw Agency site would be accomplished in consultation with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana. These groups would also be consulted in the development of new parkway interpretive materials to ensure that they were accurate and inclusive of Native Americans' viewpoints.

Other archeological sites in the project area are early to mid 20th century and have been determined ineligible for the National Register of Historic Places due to the lack of historical integrity and significance, and no adverse effects on significant archeological information would be expected.

Cumulative Impacts. No cumulative impacts on archeological resources were identified.

Conclusion. The Choctaw Agency site would be avoided by construction disturbance. Any inadvertent archeological discoveries would result in consultation with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana to ensure appropriate mitigation, in accordance with a memorandum of understanding. The park would undertake appropriate measures to avoid or mitigate potential adverse effects from public visitation before opening the site to interpretation. The Choctaw Nation and other tribal representatives would be contacted to help develop new parkway interpretive materials that were accurate and inclusive of Native Americans' viewpoints.

Natural Resources

Air Quality

Analysis. Alternative 3 peak-hour traffic volumes on Old Agency Road Relocated between Richardson Road and Highland Colony Parkway are projected to be 1,125 vehicles in 2003 and 2,100 vehicles in 2020 (see table 22 below). Based on these volumes and speeds of 40 kph (25 mph), a CO screening test determined that the critical distance would be less than 3.1 meters (10 ft.) in 2003 and 5.9 meters (18 ft.) in 2020. Like the revised proposed action and alternatives 1 and 2, national ambient air quality standards would not be exceeded, and air quality impacts would be negligible.

Cumulative Impacts. Traffic volumes on other roadways throughout the project area would continue to increase along with population increases. However, the cumulative effect of the combined traffic volumes are not expected to exceed national ambient air quality standards for carbon monoxide.

TABLE 22: AIR QUALITY DATA SUMMARY, ALTERNATIVE 3

Year	Average Speed	Design-Hour Traffic Volumes	Critical Distance	Closest Receptor
2003	40 kph (25 mph)	1,125	<3.1 m (<10 ft.)	Approx. 30.5 m (100 ft.)
2020	40 kph (25 mph)	2,100	5.9 m (18 ft.)	Approx. 30.5 m (100 ft.)

Conclusion. Alternative 3 would have a negligible impact on air quality over the short and long term. Alternative 3 would not cause violations of national ambient air quality standards for carbon monoxide. No mitigation measures would be required with this alternative.

Soils

Analysis. As described for the revised proposed action and alternatives 1 and 2, mitigating measures would be taken for where road alignments crossed soils classified as silt loams that have low strength for streets and roads. Soil erosion would result from clearing some vegetation from the project area. Some soils could be enhanced and improved with the removal of roads and the restoration of vegetation. A soil erosion control plan would be prepared and implemented (see page 32).

Long-term and negligible effects on project area soils would include excavation, the mixing of soil horizons, and the addition of aggregate fill and road surface pavement over existing soils. The extent of soil impacts is unknown. A total of 12.1 hectares (30.0 ac.) of vegetation would be affected, which is indicative of the surface acreage of soils that would be impacted by construction.

Cumulative Impacts. No cumulative impacts were identified for this alternative.

Conclusion. As described for the revised proposed action and alternatives 1 and 2, long-term, negligible impacts would occur to project area soils due to excavation. Mitigation efforts would be undertaken to prevent soil erosion and to address the expansive characteristics of local soils.

Wetlands

Analysis. A total of 0.7 hectare (1.7 ac.) of riverine and palustrine emergent, scrub/shrub, and forested wetlands would be filled by constructing the parkway motor road, Old Agency Road Relocated, and the extension of Richardson Road. Table 23 identifies the potential adverse or beneficial impacts to wetland areas 1 through 10. Wetland impacts would be the same as the revised proposed action and alternative 2, except for negligible adverse impacts that would occur in the eastern portion of wetland area 7. The extension of Richardson Road to Old Agency Road Relocated would result in the loss of less than 0.01 hectare (<0.01 ac.) of wetland, reducing the size of wetland 7 by 2.6%. No impacts would result from the bridge along the parkway motor road that would cross Richardson Road.

Based on the NPS wetland protection guidelines *(DO 77-1: Wetland Protection)*, a statement of findings would be required to implement this alternative due to adverse impacts to wetlands. Suitable wetland restoration areas would need to be identified to provide a minimum of a one-to-one functional replacement of wetlands that were adversely affected.

TABLE 23: WETLAND IMPACTS, ALTERNATIVE 3

Wetland	Size of Wetland Affected	Percentage of Wetland Area Affected	Impact Intensity and Direction
1	0	0	No impact
2	<0.01 ha (<0.01 ac.)	0.3	Negligible adverse
3	0	0	No impact
4 and 6	0.4 ha (1.1 ac.)	40	Major adverse
5	0	0	Minor beneficial
7	<0.01 ha (<0.01 ac.)	2.6	Negligible adverse
8	<0.1 ha (0.15 ac.)	15	Moderate adverse
9	0.2 ha (0.4 ac.)	13	Moderate adverse
10	0	0	No impact

Cumulative Impacts. Cumulative impacts would be the same as for the revised proposed action and alternatives 1 and 2.

Conclusion. Approximately 0.7 hectare (1.7 ac.) of wetlands would be permanently filled to construct new roads. Negligible adverse impacts would occur to wetland areas 2 and 7 because of road fill that would slightly reduce the size of both wetlands. Long-term, moderate adverse impacts would occur to wetland areas 8 and 9 because of reduction in wetland size. Long-term, major adverse impacts would occur in wetland areas 4 and 6, as each wetland area would be reduced in size 35% to 40%, and the remaining wetland sections would be fragmented. No adverse impacts would occur to wetland areas 1, 3, 5 and 10. Removing portions of Old Agency Road and other access roads could provide opportunities to improve wetland systems in areas 5 and 7.

The development of the remaining sections of the parkway motor road to the west of the project area would result in an additional loss of 0.6 hectare (1.5 ac.) and a cumulative wetland impact of 1.3 hectares (3.2 ac.).

Water Quality

Analysis. As described for alternatives 1 and 2, potential impacts to water quality from construction of the parkway motor road and Old Agency Road Relocated would occur in the same areas as described under "Wetland" impacts. Construction would cause short-term, negligible adverse impacts on the water quality of the small, unnamed tributaries of White Oak Creek and Purple Creek. Mitigating measures would be taken to reduce impacts as described beginning on page 32.

Anticipated traffic volumes on the Natchez Trace Parkway and Old Agency Road Relocated would be less than 30,000 vehicles per day. Water quality impacts caused by highway runoff would be long term, but negligible.

Water runoff from the road surfaces, embankments, and other parkway elements would be directed through culverts and other water drainage structures. The local surface-water drainage patterns would not change, although stormwater discharge could increase. The restoration of Old Agency Road and of access roads within the project area would allow the enhancement or possible reestablishment of historic drainage patterns.

Conclusion. As described for the revised proposed action and alternatives 1 and 2, short-term, negligible adverse impacts would occur to water quality caused as a result of construction activity releasing soil and debris into unnamed streams. Stormwater discharged into local streams could result in long-term, minor impacts from increased peak flows. Restoring former road alignments could benefit local hydrologic and drainage patterns.

Vegetation

Analysis. This alternative would be similar to the revised proposed action and alternatives 1 and 2, except that all of Old Agency Road within the project area would be fully restored to Old Trace appearances, Richardson Road would be extended to Old Agency Road Relocated, and the parkway motor road would bridge over the extended Richardson Road.

Table 24 identifies vegetation impacts and restoration opportunities for alternative 3 by vegetation type. While individually these impacts would be most likely minor to moderate, collectively the loss

TABLE 24: VEGETATION IMPACTS, ALTERNATIVE 3

	Vegetation Loss for	Revegetation		
Vegetation Type	New Roads	Old Agency Road	Other Roads	Net Loss
Mixed Hardwood	0.8 ha (2.0 ac.)	*0*	*0*	0.8 ha (2.0 ac.)
Pine/Oak	3.8 ha (9.5 ac.)	*1.0 ha (2.4 ac.)*	*0.3 ha (0.7 ac.)*	2.5 ha (6.4 ac.)
Late Successional Fields	4.1 ha (10.2 ac.)	*1.5 ha (3.6 ac.)*	*0.1 ha (0.2 ac.)*	2.5 ha (6.4 ac.)
Agricultural Fields	3.4 ha (8.3 ac.)	*0.7 ha (1.8 ac.)*	*0*	2.7 ha (6.5 ac.)
Net Total	**12.1 ha (30.0 ac.)**	***3.2 ha (7.8 ac.)***	***0.4 ha (0.9 ac.)***	**8.5 ha (21.3 ac.)**

Note: Italicized numbers represent areas restored or replanted with native vegetation.

of 8.5 hectares (21.3 ac.) of vegetation would be moderate to major because it would be permanent, highly noticeable, and substantial within the boundaries of the project area.

Mixed-Hardwood Forest — Impacts would be the same as the revised proposed action and alternatives 1 and 2; 0.8 hectare (2.0 ac.) of this vegetative type would be cleared during construction, and no revegetation would occur.

Pine/Oak Forest — New road development would result in the removal of 3.8 hectares (9.5 ac.) of pine/oak forest. With the removal of existing roads and restoration or revegetation, long-term net loss of pine/oak forest would be 2.5 hectares (6.4 ac.). This loss would be major because it would be substantial and highly noticeable.

Late Successional Fields — Impacts would be the same as the revised proposed action and alternative 1. New road development would result in the removal of 4.1 hectares (10.2 ac.); restoration and revegetation would reduce this loss of late successional fields to 2.5 hectares (6.4 ac.).

Agricultural Fields — Additional segments of the Old Agency Road would be removed, compared to the revised proposed action and alternatives 1 and 2, allowing for the restoration to Old Trace appearances of 0.7 hectare (1.8 ac.) of agricultural fields. In addition, the parking area at the Choctaw Agency site would be constructed in this vegetation type. The long-term net loss would be 2.7 hectares (6.5 ac.) of agricultural fields, a minor to moderate effect.

Cumulative Impacts. Cumulative impacts would be the same as the revised proposed action and alternatives 1 and 2. Additional vegetation losses would occur within the project area because of the multi-use trail and other parkway projects.

Conclusion. The development of new roads and a parking area would result in the loss of approximately 12.1 hectares (30.0 ac.) of vegetation during construction. The removal of some roads, including all of Old Agency Road within the project area, Brame Road, and access roads into the Dinsmor subdivision and Greenwood Plantation, would allow for restoration or revegetation of approximately 3.6 hectares (8.7 ac.). The long-term impact would be moderate to major within the project area, with a net loss of 8.5 hectares (21.3 ac.) of vegetation. The construction of a multi-use trail within the parkway motor road and other parkway projects east and west of the project area would cause permanent cumulative losses of vegetation in the local area.

Wildlife

Analysis. The loss of vegetation in this alternative could result in minor wildlife population decreases because of the potential loss of habitat, as discussed for the revised proposed action and alternatives 1 and 2. Other impacts relate to wildlife fragmentation and isolation due to the development of new roadways. Potential long-term losses of wildlife habitat would total 8.5 hectares (21.3 ac.).

Cumulative Impacts. Cumulative impacts would be the same as the revised proposed action and alternatives 1 and 2. Vegetation losses associated with a new multi-use trail could result in some minor losses and fragmentation of wildlife habitat.

Conclusion. Vegetation losses would result in a long-term decrease of 8.5 hectares (21.3 ac.) of potential wildlife habitat and minor impacts on wildlife populations. Local parkway and trail projects could also result in additional long-term and cumulative losses of wildlife habitat.

Threatened or Endangered Species, or Species of Special Concern

Analysis. Impacts would be the same as the revised proposed action and alternatives 1 and 2. Short-term impacts due to vegetation clearing could result in diminished habitat for any state-listed species occurring in the project area during construction; additional habitat loss and permanent fragmentation could occur when roadways were complete. For all state-listed species of concern, the impacts would be either minor or negligible.

Cumulative Impacts. No cumulative effects would occur because of the lack of significant habitat for special status species (the same as the revised proposed action and alternatives 1 and 2).

Conclusion. No federally listed species are found within the project area. Impacts to Mississippi species of special concern would be negligible to minor because of the potential loss of habitat.

Socioeconomic Environment

Land Use

Analysis. *Consistency with Local Comprehensive Plans* — Impacts would be similar to the revised proposed action and alternatives 1 and 2. The land use designations in Ridgeland's *Year 2020 Comprehensive Plan* would not be affected. Access to and from the various land uses identified in the plan, such as low-density residential, residential estate, and public/quasi-public, would remain.

The development of the parkway motor road and Old Agency Road Relocated in alternative 3 would also be consistent with Ridgeland's *Year 2020 Comprehensive Plan* map. However, the closure of Old Agency Road from Highland Colony Parkway to near Whippoorwill Lane would not be consistent with the map, which shows Old Agency Road as a collector through the project area. This alternative, like the revised proposed action and alternative 2, would complement the cultural and historical goals and policies in the *Comprehensive Plan* by providing access to the Choctaw Agency site.

Consistency with the Local Long-Range Transportation Plan — The impacts of alternative 3 would be the same as the revised proposed action and alternatives 1 and 2. The development of both the parkway motor road and Old Agency Road Relocated would be consistent with *The Jackson Urbanized Area's Transportation Plan for the Year 2020* and the *Transportation Plan Update for the City of Ridgeland.* Neither transportation plan indicates whether the existing segment of Old Agency Road through the project area would remain open or closed.

Planned Developments — Impacts would be the same as the revised proposed action and alternatives 1 and 2. Alternative 3 would not have direct impacts on the planned unit residential development at

Brame Road and Highland Colony Parkway, and traffic on Brame Road could increase. Plans for an elderly care center near the entrance to the Dinsmor subdivision would not be impacted by this alternative. Access to the Dinsmor subdivision, Greenwood Plantation, and Brame Road would be provided from Old Agency Road Relocated, minimizing impacts on local residents and planned developments.

Cumulative Impacts. No cumulative impacts would result from implementing this alternative.

Conclusion. Constructing Natchez Trace Parkway and Old Agency Road Relocated through the project area would be beneficial because both actions are consistent with Ridgeland's *Year 2020 Comprehensive Plan, The Jackson Urbanized Area's Transportation Plan,* and the *Transportation Plan Update for the City of Ridgeland.* The future use of Old Agency Road through the project area is not identified in either transportation plan. Closing Old Agency Road from Highland Colony Parkway to Whippoorwill Lane would not be consistent with the *Comprehensive Plan* map. This alternative would complement the *Comprehensive Plan's* cultural and historical goals by providing access to the Choctaw Agency site from the parkway.

Visual Resources

Analysis. Actions in alternative 3 that could affect visual resources include constructing the parkway motor road, Old Agency Road Relocated, the extension of Richardson Road south to Old Agency Road Relocated, and a parkway bridge over the Richardson Road extension, plus closing Old Agency Road from near Whippoorwill Lane to Highland Colony Parkway to vehicular traffic and restoring it to Old Trace appearances.

Densely Wooded Areas — Similar to the revised proposed action and alternatives 1 and 2, clearing in densely wooded areas (mixed hardwood and pine/oak forest) would interrupt the continuity of the wooded areas and the overhead tree canopy. Because the parkway bridge would cross over Richardson Road extension perpendicularly, a shorter bridge (68.6 meters [225 ft.]) would be constructed, with less forest clearing for fill embankments at the bridge abutments (see the conceptual bridge sketch for this alternative on page 24). Limits on clearing would reduce the amount of vegetation that would be removed, and revegetation of some areas affected during construction would result in a short-term, moderate impact. There would be a total net loss of approximately 3.3 hectares (8.4 ac.) of densely wooded area.

Open Fields — Construction would affect open fields within the eastern portion of the project area. There would be a total net loss of approximately 5.2 hectares (12.8 ac.) of open fields; the impact would be adverse, long term, and major because they provide an important visual contrast to densely wooded areas that would be permanently lost. Revegetation would be inconsistent with their existing visual character.

Views from and to the Parkway — Vegetative clearing required for constructing the parkway motor road would potentially open views to the north to the Windrush and Canterbury subdivisions, as well as views of the parkway from these developments. The Richardson Road extension would be seen from the parkway motor road and the Windrush and Canterbury subdivisions. On Old Agency Road Relocated there would be views to and from the Dinsmor subdivision and Greenwood Plantation on the south. The revegetation of disturbed areas would screen some views, resulting in short-term, moderate visual impacts.

The parkway bridge over the Richardson Road extension would be in an intermingled wooded and open field area. Because of the mixed forested/open field character, the reduced clearing required, and the height of the bridge at approximately that of the remaining trees (6.0 meters [20 ft.]), there would be filtered views of the bridge and embankments from adjacent residential subdivisions; direct views would occur from the existing Richardson Road (primarily southbound). With revegetation the impact would be short term and moderate.

Visual Experience — Similar to the revised proposed action and alternatives 1 and 2, the visual experience would be changed for users of the parkway and Old Agency Road Relocated, as well as for users of other narrow, two-lane, tree-canopied roads in the area. The narrow, tree-canopied, two-lane Old Agency Road would be replaced by a much wider Old Agency Road Relocated (see typical cross-sections on page 16). This loss of the visual experience would be a long-term, major impact.

Completing this section of the parkway motor road, along with using consistent designs and details, would enhance the continuity of the visual experience for parkway users, a long-term, major benefit.

Cumulative Impacts. As described for the revised proposed action and alternatives 1 and 2, the construction of a multi-use trail within the project area would have a negligible impact on visual resources.

Conclusion. Similar to the revised proposed action and alternatives 1 and 2, under alternative 3 visual impacts on mixed-hardwood forests would be adverse, long term, and moderate; impacts on open fields would be long term and major. Views from the parkway motor road of adjacent development, and views of the bridge, Old Agency Road Relocated, and the Richardson Road extension would be adverse, moderate impacts pending the revegetation of disturbed areas. Changes to the visual experience for users of local roads would be adverse, long term, and major. Completing this parkway section would improve the continuity of the visual experience, a long-term, major benefit.

Recreational Users and Facilities

Analysis. As described for the revised proposed action and alternatives 1 and 2, completing this section of the parkway motor road would improve the continuity of the Natchez Trace Parkway, significantly enhancing the recreational driving experience for parkway travelers. This would provide a long-term, major benefit.

Like the revised proposed action and alternative 2, an access road would be provided from the parkway motor road to a visitor parking area adjacent to the Choctaw Agency site. Providing interpretive and educational programs to local residents, as well as parkway users, would result in a long-term, moderate benefit.

Cumulative Impacts. As described for the revised proposed action and alternatives 1 and 2, the construction of a multi-use recreational trail would accommodate nonmotorized use and minimize conflicts between trail users and vehicular traffic on adjacent roadways. The trail could connect with a network of other trails in the area, providing local residents as well as parkway travelers additional recreational opportunities, such as hiking and bicycling. This would provide a long-term, moderate beneficial impact.

Conclusion. As described for the revised proposed action and alternatives 1 and 2, completing this section of the Natchez Trace Parkway would improve the continuity of the recreational driving experience for parkway travelers, a long-term, major benefit. Like the revised proposed action and alternative 2, providing access to and parking at the Choctaw Agency site would make it easier to offer interpretive and educational programs, enhancing opportunities for parkway users and local residents; this would be a long-term, moderate benefit. A multi-use recreational trail would provide local residents as well as parkway users additional recreational opportunities, a long-term, moderate benefit.

Local Residents

Analysis. Under alternative 3 the following actions could affect local residents: the construction of the parkway motor road, Old Agency Road Relocated, the Richardson Road extension (including a parkway bridge), and the closure and restoration of Old Agency Road between Whippoorwill Lane and Highland Colony Parkway. Compared to other alternatives, alternative 3 would have different impacts because of the extension of Richardson Road and the parkway bridge.

Community Character — Impacts would be the same as alternative 1, except that the Richardson Road extension south to Old Agency Road Relocated and the parkway bridge would require additional removal of vegetation. Some impacted areas would be revegetated, and efforts would be made to minimize clearing. Because the parkway bridge would be in the central portion of the corridor, the additional loss of vegetation would have a short-term, moderate impact on the setting of adjacent residences. The introduction of a higher speed urban roadway (Old Agency Road Relocated) and related increases in traffic volume would be a short-term, moderate impact.

Restoring Old Agency Road between Whippoorwill Lane and Highland Colony Parkway to Old Trace appearances would improve privacy and seclusion for residents in the Windrush and Canterbury subdivisions, as well as for St. Andrew's School. This would be a long-term, major benefit.

Community Qualities — As described for the revised proposed action and alternatives 1 and 2, there would be no effect on community qualities under this alternative.

Accessibility — The Richardson Road extension would slightly improve access to local attractions across the project area, resulting in minor out-of-direction travel. Access to Brame Road and Greenwood Plantation would be the same as for the revised proposed action and alternative 2. However, access to I-55 via Highland Colony Parkway from Old Agency Road Relocated would result in a long-term, moderate effect on regional accessibility, as described for the revised proposed action and alternative 2.

Cumulative Impacts. As described for the revised proposed action and alternatives 1 and 2, a multi-use trail would potentially improve the quality of life for local residents.

Conclusion. Similar to the revised proposed action and alternatives 1 and 2, impacts on the community setting from the clearance of vegetation, the intrusion of urban standard roadways and a bridge, and the proximity of roadways to established residential subdivisions would be short term and moderate. A multi-use trail could improve the quality of life for local residents. Closing Old Agency Road to vehicular traffic from near Whippoorwill Lane to Highland Colony Parkway and restoring it to Old Trace appearances would increase privacy and seclusion for residents to the north, a long-term, major benefit. With the Richardson Road extension, minor out-of-direction travel would be required for access to local attractions across the project area. Access to I-55 via Highland Colony Parkway from Old Agency Road Relocated would result in a long-term, moderate effect on regional accessibility.

TABLE 25: PROJECTED NOISE LEVELS, ALTERNATIVE 3

Residential Area or Site	Noise Abatement Criteria (Leq)	Existing Conditions (dB(A))	2003 Projection (dB(A))	2020 Projection (dB(A))
East Windrush	67	47	49	53
West Windrush	67	41	48	52
East Dinsmor	67	42	52	54
West Dinsmor	67	44	51	54
Brame Road	67	37	46	49
Canterbury	67	51	50	53
Greenwood Plantation	67	36	44	47
Choctaw Agency Site	67	53	54	58

Noise

Analysis. Noise levels would be similar to the other alternatives, except noise levels would be reduced by 1 to 3 dB(A) at the Choctaw Agency site and the Canterbury subdivision because Old Agency Road would be fully restored to Old Trace appearances (see table 25). Negligible to minor increases in noise levels would occur in the short term; minor to moderate increases would occur in the long term. The smallest increases would occur in the vicinity of the Choctaw Agency site, the Canterbury subdivision, and the east Windrush subdivision. The greatest increase (11 to 12 dB(A)) would occur in the Dinsmor and the west Windrush subdivisions, near Brame Road, and at Greenwood Plantation because of the addition of Old Agency Road Relocated. This increase would not exceed state guidelines, and all noise levels (the highest projected level would be 58dB(A) at the Choctaw site in 2020) would be less than FHWA noise abatement criteria for residential and park areas (67 dB(A)). As described for alternative 1, construction noise would also occur in the short-term, but is allowed during daytime hours (6 A.M. to 6 P.M.), according to city noise ordinances.

Cumulative Impacts. Cumulative impacts would be the same as alternative 1. Additional construction-related noise could occur due to adjacent parkway projects.

Conclusion. The full restoration of Old Agency Road and the addition of the parkway motor road and Old Agency Road Relocated would result in a negligible to minor increase in short-term noise levels and a minor to moderate increase in long-term noise levels at all adjacent residential areas and other sites. The greatest increase in long-term noise levels would be 12 dB(A) at east Dinsmor and Brame Road, and the highest noise level would be 58 dB(A) near the Choctaw Agency site. Neither level would exceed the state guidelines or approaches the FHWA noise abatement criteria of 67 dB(A).

Unavoidable Adverse Effects

Impacts to access would be adverse and major because both travel patterns and access locations would change.

Similar to the previous alternatives, the parkway motor road crossing of the Old Natchez Trace approximately at grade would truncate this segment of the trace, an adverse, moderate effect. Closing 1.4 kilometers (0.9 mi.) of Old Agency Road to vehicular traffic (the longest segment of any alternative) would adversely affect historical patterns of circulation and continuous use. The loss of a portion of the Greenwood Plantation driveway would be an unavoidable, adverse effect.

A total of 0.7 hectare (1.7 ac.) of riverine and palustrine emergent, scrub/shrub, and forested wetlands would be filled by construction of the parkway motor road, Old Agency Road Relocated, and the Richardson Road extension. Major long-term adverse impacts would occur in wetland areas 4 and 6, as each wetland area would be reduced in size approximately 35% to 40% and the remaining wetland sections would be fragmented (the same as alternative 2). A total of 8.5 hectares (21.3 ac.) of vegetation would be impacted by alternative 3.

New roads would traverse open fields and require clearing in wooded areas, resulting in long-term and major to moderate impacts on these visual resources. Revegetating disturbed areas would screen views of adjacent developments, resulting in short-term, moderate impacts to views to and from new roadways. Changes to the visual experience of users of local roads would be a long-term, major impact.

Short-term, adverse impacts on local residents would result from the intrusion of the parkway motor road, Old Agency Road Relocated, and the parkway bridge into the present setting. The scale of the roadways and bridge, and the higher speed movement of increasing traffic volumes near established residential subdivisions, would be short-term, moderate effects.

Relationship of Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity

As described for alternatives 1 and 2, the effects of construction on the parkway's natural and cultural resources, visitor services, and the region's socioeconomic environment would be primarily short term and of moderate impact. The effects of revegetation, which would begin immediately following construction, would be clearly visible for one to two years, and wildlife temporarily displaced by construction would be expected to reoccupy parkway lands near the new roadway once construction was completed.

There would be long-term impacts to a 1.4 kilometer (0.9 mi.) portion of the Old Natchez Trace and the Greenwood Plantation driveway as a result of closing them to vehicular traffic and restoring or revegetating them. Following construction, the National Park Service would continue to manage parkway lands to preserve the natural and cultural resources and to provide visitor experiences and services consistent with resource management needs.

There would be short-term traffic disruption during construction. However, the long-term gain would be the construction of the parkway motor road, allowing visitors direct access to cultural resources.

Short-term impacts related to construction would also include a negligible increase in both employment opportunities for construction workers and in the revenues generated by construction activities for local businesses and government. Over the long term, however, the proposed development would have a negligible impact on the region's socioeconomic environment.

Irreversible and Irretrievable Commitments of Resources

Alternative 3 would cause irreversible moderate adverse impacts to a 1.4 kilometer (0.9 mi.) portion of the historic Old Natchez Trace, resulting in the loss of historical patterns of circulation and use. This loss would be greater than under the previous alternatives. Removing a portion of the Greenwood Plantation driveway within the NPS right-of-way would irretrievably alter the historical approach to this property.

Under alternative 3 approximately 0.7 hectare (1.7 ac.) of wetlands would be permanently filled to construct new roads, and net vegetation losses would total of 8.5 hectares (21.3 ac.). Wetland and vegetation losses would be considered irretrievable commitments of resources within the project area. If this alternative was implemented, a statement of findings would be prepared that would identify suitable wetland restoration areas for a minimum one-to-one replacement of impacted wetlands.

This alternative would require minor amounts of fossil fuels, labor, and highway construction materials. These resources are not in short supply, and their use would not have an adverse effect on the continued availability of these resources. The proposed construction would also result in an irreversible commitment or expenditure of funds.

IMPACTS OF ALTERNATIVE 4

Transportation/Traffic Impacts

Access

Analysis. The roadway configuration in alternative 4 would create a moderate impact to access. Access would continue to all roads, but some travel patterns would be altered. Drivers accessing Brame Road, Greenwood Plantation, and the Dinsmor subdivision might be inconvenienced over the short term as they adjusted to new travel patterns on Old Agency Road Relocated. The addition of an intersection at Highland Colony Parkway and Old Agency Road Relocated would provide a more direct route to these residential areas over the long term. No changes would be made to the existing access points for St. Andrew's School and its athletic fields.

As described for the other alternatives, no direct local access would be provided to the parkway motor road, in accordance with the legislation establishing the parkway. This alternative would provide access from the parkway motor road to the Choctaw Agency site (the same as alternatives 2 and 3).

Impact Highlights of Alternative 4

- Additional east-west traffic capacity would be available in the project area because Old Agency Road Relocated would be constructed from just east of Whippoorwill Lane to Highland Colony Parkway and because Old Agency Road would remain open to vehicular traffic throughout the project area.
- Safety issues would continue on Old Agency Road because it would be open to vehicular traffic throughout the project area. Because Old Agency Road would remain open, less traffic would be rerouted to the safer, better designed Old Agency Road Relocated than in other alternatives.
- Because Old Agency Road would remain open, this is the only alternative where the Old Trace would not be truncated by an at-grade crossing by the parkway motor road, and historical patterns of circulation and continuous use of Old Agency Road in the project area would remain. The Old Trace would not be restored to historical appearances.
- This alternative would have the greatest impact to vegetation, particularly late successional and agricultural fields.
- Because of the location of and skew at which the parkway motor road would bridge over Old Agency Road, this bridge would be the longest, highest, and most visible to local residents; adjacent development could be more visible to parkway users.
- The change in the visual experience for local users on Old Agency Road would be less than under the other alternatives because the road would remain open to vehicular traffic.

Cumulative Impacts. As described for the previous alternatives, completing the parkway motor road through the project area would improve the continuity of interstate recreational travel for parkway users.

Conclusion. Impacts to access would be adverse and moderate because traditional access from residential areas south of the project area to Old Agency Road would be changed to Old Agency Road Relocated, resulting in changes to some local travel patterns. As a result, long-term, minor changes in travel times would occur. Access would continue to be provided to all residential areas, schools, and other facilities surrounding the project area.

Volumes

Analysis. There would be a moderate, beneficial reduction in traffic volumes along Old Agency Road from 10,000 to approximately 8,000 vehicles per day. The reductions should benefit drivers continuing to use Old Agency Road, as the delay to turn from the cross-streets should be reduced. The volumes estimated for Old Agency Road Relocated would be minimal, less than 2,000 vehicles per day, including those accessing Brame Road, Greenwood Plantation, and a portion of the through-traffic that would divert from Old Agency Road. The volumes of both roads would be within the threshold for collector roadways.

Volumes on the parkway motor road would be the same as the previous alternatives. Approximately 7,200 vehicles per day would occur on the parkway on opening day. The extent of future volume increases would depend on the development of additional east-west commuter routes in the local vicinity.

Cumulative Impacts. As described for the other alternatives, traffic volumes on the new parkway motor road segment could increase if it was used by commuters. Proposed long-range improvements in the Ridgeland *Transportation Plan Update* include constructing additional, more direct east-west corridors that would alleviate the use of the parkway motor road by commuter traffic.

Conclusion. Volume impacts would be beneficial and moderate as a portion of traffic on Old Agency Road would be shifted to Old Agency Road Relocated. Traffic volumes on the parkway on opening day would be approximately 7,200 vehicles.

Safety

Analysis. Impacts to safety would be minor. Old Agency Road would remain without improvement to sight distances and grade; thus, the potential for a high accident rate would remain. Old Agency Road Relocated would be constructed to appropriate standards, providing adequate sight distance, and safety should be improved. Safety mitigation should include designing the new intersection at Old Agency Road and Old Agency Road Relocated as a T intersection to provide adequate sight distance. Less than 2,000 vehicles per day, including those accessing Brame Road, Greenwood Plantation, and a portion of the through-traffic would be diverted from Old Agency Road, but this would not be enough to substantially reduce the accident rate on Old Agency Road. Emergency vehicle response times would remain basically unchanged, but could show improvements similar to the revised proposed action because of better road design and additional east-west access.

Cumulative Impacts. No safety-related cumulative impacts were identified.

Conclusion. Improvements to safety would be minor since Old Agency Road would remain open. Less than 2,000 vehicles per day would be shifted to Old Agency Road Relocated, which would not be enough to improve safety conditions on Old Agency Road. Emergency vehicle response times would remain basically unchanged, but could improve because of better road design and additional east-west access.

Cultural Resource Impacts

Historic Resources

Analysis. Under this alternative Old Agency Road (Old Natchez Trace) within the NPS right-of-way would remain open to vehicular traffic, and the new parkway motor road would pass over the Old Trace, thus avoiding physical disturbances otherwise associated with an at-grade crossing. However, the parkway overpass would visually intrude on the historical setting of the road corridor. Vegetation screening could soften or reduce the visual impacts of the overpass, but the structure would have an adverse, major effect on the historical appearance of the Old Natchez Trace in this section.

As described for the other alternatives, removing a portion of the Greenwood Plantation driveway would irretrievably alter the historical approach. Photo-documentation would provide an archival record of the drive's current character-defining attributes. The National Park Service would work with the landowner to use vegetation to screen the property from the parkway motor road.

Cumulative Impacts. Leaving the portion of Old Agency Road (Old Natchez Trace) open for traffic would not change the current experience motorists have as they drove along the extended road corridor.

Conclusion. Even though the segment of Old Agency Road (Old Natchez Trace) within the NPS right-of-way would remain open to vehicular traffic and would not be truncated by an at-grade crossing, a parkway overpass would nevertheless intrude on the historical setting of the road corridor, resulting in an adverse, major effect. Closing a portion of the Greenwood Plantation driveway within the NPS right-of-way would irretrievably alter the historical approach to this property.

Archeological Resources

Analysis. As described for the previous alternatives, the potential for inadvertent discoveries of archeological resources in the construction zone could be high because of its proximity to the Choctaw Agency site. While the Choctaw Agency site would be avoided by construction, archeological monitoring would be required to ensure protection. Any inadvertent archeological discoveries would result in consultation with the Choctaw Tribe in accordance with the memorandum of understanding that is being developed between the National Park Service and the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana.

As described for the revised proposed action and alternatives 2 and 3, the National Park Service would ensure that adequate site security measures (including park patrols, surveillance, fencing, and educational outreach programs) were implemented before interpretive site development and public programs were initiated at the Choctaw Agency site. The access road would be designed to minimize disturbance to the cultural setting of the area. Providing direct access from the parkway motor road would allow the area to be more easily monitored.

Also as described for the revised proposed action and alternatives 2 and 3, interpretive design and development for the Choctaw Agency site would be accomplished in consultation with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw. These groups would also be consulted in the development of new parkway interpretive materials to ensure that they were accurate and inclusive of Native Americans' viewpoints.

Other archeological sites in the project area are early to mid 20th century and have been determined ineligible for the National Register of Historic Places due to the lack of historical integrity and significance, and no adverse effects on significant archeological information would be expected.

Cumulative Impacts. No cumulative impacts on archeological resources were identified.

Conclusion. The Choctaw Agency site would be avoided by construction disturbance. The National Park Service would take measures to avoid or mitigate potential adverse effects related to public visitation before opening the site to interpretation. The Choctaw and other tribal representatives would be contacted to help develop new interpretive materials for the parkway that were accurate and inclusive of Native Americans' viewpoints.

Natural Resources

Air Quality

Analysis. Alternative 4 peak-hour traffic volumes for Old Agency Road between Richardson Road and Highland Colony Parkway are projected to be 900 vehicles in 2003 and 1,450 vehicles in 2020 (see table 26). Based on these volumes and speeds of 40 kph (25 mph), a CO screen determined that the critical distance would be less than 3.1 meters (10 ft.) in both 2003 and 2020 (the same as alternative 2). Like the other alternatives, national ambient air quality standards would not be exceeded, and air quality impacts would be negligible.

TABLE 26: AIR QUALITY DATA SUMMARY, ALTERNATIVE 4

Year	Average Speed	Design-Hour Traffic Volumes	Critical Distance	Closest Receptor
2003	40 kph (25 mph)	900	<3.1 m (<10 ft.)	Approx. 30.5 m (100 ft.)
2020	40 kph (25 mph)	1,400	<3.1 m (<10 ft.)	Approx. 30.5 m (100 ft.)

Cumulative Impacts. Traffic volumes on other roadways throughout the project area would continue to increase as population increased. However, total traffic volume increases are not expected to exceed national ambient air quality standards for carbon monoxide.

Conclusion. Alternative 4 would have a negligible impact on air quality over the short and long term. Alternative 4 would not cause violations of national ambient air quality standards for carbon monoxide. No mitigation measures would be required.

Soils

Analysis. As described for the other alternatives, mitigating measures would be taken where road alignments crossed silt loams, which have low strength for streets and roads. Clearing vegetation within the project area would expose soils to erosive water and wind action. Some soils could be enhanced and improved with the removal of roads and the restoration of vegetation. A soil erosion control plan would be prepared and implemented (see page 32).

Long-term, negligible effects on project area soils would include excavation, the mixing of soil horizons, and the addition of aggregate fill and road surface pavement over existing soils. The exact amount of soil that would be excavated is unknown; however, the amount of vegetation that would be disturbed under this alternative by construction (11.1 ha [27.5 ac.]) is indicative of the surface acreage of soils that would be impacted.

Cumulative Impacts. No cumulative impacts were identified under this alternative.

Conclusion. Long-term, negligible impacts would occur to project area soils due to excavation. Mitigation efforts would be undertaken to prevent soil erosion and to address the expansive characteristics of local soils.

Wetlands

Analysis. Approximately 0.7 hectare (1.7 ac.) of riverine and palustrine emergent, scrub/shrub, and forested wetlands would be filled as a result of constructing the parkway motor road and Old Agency Road Relocated. Table 27 identifies the potential adverse or beneficial impacts to wetland areas 1 through 10. Impacts to all wetland areas would be the same as the revised proposed action and alternative 2, except for the loss of restoration opportunities that would result in wetland areas 5 and 7. Old Agency Road Relocated would be constructed; however, Old Agency Road would remain in its current location.

Based on the NPS wetland protection guidelines *(DO 77-1: Wetland Protection)*, a statement of findings would be required to implement this alternative because of wetland impacts. Suitable wetland restoration areas would need to be identified to provide a minimum of a one-to-one functional replacement of wetlands adversely affected.

Cumulative Impacts. Cumulative impacts would be the same as the other alternatives.

Conclusion. Approximately 0.7 hectare (1.7 ac.) of wetlands would be permanently filled to construct new roads. Long-term, major adverse impacts would occur to wetlands 4 and 6, as each would be reduced in size 35% to 40%, and the remaining sections fragmented. Long-term, moderate adverse impacts would occur to wetlands 8 and 9 because of reduction in size. Negligible adverse impacts would occur to wetland 2. No adverse impacts would occur to wetlands 1, 3, 5, 7, and 10.

As described for alternatives 2 and 3, the development of remaining sections of the parkway motor road to the west of the project area would result in an additional loss of 0.6 hectare (1.5 acres) and a cumulative wetland impact of 1.3 hectares (3.2 acres).

TABLE 27: WETLAND IMPACTS, ALTERNATIVE 4

Wetland	Size of Wetland Affected	Percentage of Wetland Area Affected	Impact Intensity and Direction
1	0	0	No impact
2	<0.01 ha (<0.01 ac.)	0.3	Negligible adverse
3	0	0	No impact
4 and 6	0.4 ha (1.1 ac.)	40	Major adverse
5	0	0	No impact
7	0	0	No impact
8	<0.1 ha (<0.2 ac.)	15	Moderate adverse
9	0.2 ha (0.4 ac.)	13	Moderate adverse
10	0	0	No impact

Water Quality

Analysis. As described for the other alternatives, potential impacts to water quality from construction of the parkway motor road and Old Agency Road Relocated would occur in the same areas as described under "Wetland" impacts. Construction would cause short-term, negligible impacts.

Anticipated traffic volumes on the Natchez Trace Parkway and Old Agency Road Relocated would be less than 30,000 vehicles per day. Water quality impacts caused by highway runoff would be long-term, but negligible.

Water runoff from the road surfaces, embankments, and other parkway elements would be directed through culverts and other water drainage structures. The local surface-water drainage patterns would not change, although stormwater discharge could increase. The restoration of access roads within the project area would allow the enhancement or possible reestablishment of historic drainage patterns.

Conclusion. As described for the other alternatives, short-term and negligible adverse impacts would occur to water quality as a result of construction activity releasing soil and debris into unnamed streams. Stormwater discharged into local streams could result in long-term, minor impacts from increased peak flows. The restoration of removed and relocated roads could benefit local hydrologic and drainage patterns.

Vegetation

Analysis. Vegetation impacts under alternative 4 would be greater than under all other alternatives because Old Agency Road would remain open, resulting in fewer restored acres, plus a bridge would be added for the parkway motor road to cross over Old Agency Road. (The wide roadway width, about 30.5 meters [100 ft.], used to calculate vegetation impacts takes into account the impact of the bridge proposed under this alternative.) Although Old Agency Road would not be removed and restored, the other roadways identified in alternative 1 (portions of Brame Road and the access roads to Dinsmor and Greenwood Plantation) would be removed, revegetated, and allowed to return to a natural state.

Impacts by vegetation type are identified in table 28. While individually these impacts would be most likely minor to moderate, collectively the loss of 10.7 hectares (26.6 ac.) of vegetation would be moderate to major because it would be permanent, highly noticeable, and substantial within the boundaries of the project area. All impact intensities for each vegetation type are the same as alternative 1; only the number of hectares lost varies because of some deviations in road locations and the amount of roadway restored.

> *Mixed-Hardwood Forest* — Impacts would be similar to the other alternatives, with effects on 0.8 hectare (2.0 ac.).

TABLE 28: VEGETATION IMPACTS, ALTERNATIVE 4

Vegetation Type	Vegetation Loss for New Roads	Revegetation Old Agency Road	Revegetation Other Roads	Net Loss
Mixed Hardwood	0.8 ha (2.0 ac.)	*0*	*0*	0.8 ha (2.0 ac.)
Pine Oak	3.2 ha (7.9 ac.)	*0*	*0.3 ha (0.7 ac.)*	2.9 ha (7.2 ac.)
Late Successional Field	3.7 ha (9.3 ac.)	*0*	*0.1 ha (0.2 ac.)*	3.6 ha (9.1 ac.)
Agricultural Fields	3.4 ha (8.3 ac.)	*0*	*0*	3.4 ha (8.3 ac.)
Net Total	11.1 ha (27.5 ac.)	*0*	*0.4 ha (0.9 ac.)*	10.7 ha (26.6 ac.)

Note: Italicized numbers represent areas restored or replanted with native vegetation.

Pine/Oak Forest — Assuming some revegetation of existing roadways, a long-term, net loss of 2.9 hectares (7.2 ac.) would occur.

Late Successional Fields — With revegetation of some roadways, long-term net impact to late successional fields would be 3.6 hectares (9.1 ac.).

Agricultural Fields — Impacts to agricultural fields would be the same as those under alternative 2, resulting in a net vegetation loss of 3.4 hectares (8.3 ac.) for both the short and long term.

Cumulative Impacts. Cumulative impacts would be the same as alternative 1. Additional vegetation losses would occur within the project area because of the multi-use trail and other parkway projects in the local area.

Conclusion. New roads would result in the loss of approximately 11.1 hectares (27.5 ac.) of vegetation during construction. The removal of some roads, including portions of Brame Road and access roads to the Dinsmor subdivision and Greenwood Plantation, would allow for revegetation of approximately 0.4 hectare (0.9 ac.). The long-term impact would be moderate to major within the project area, with a net loss of 10.7 hectares (26.6 ac.) of vegetation. The construction of a multi-use trail within the parkway motor road and other parkway projects to the east and west would cause permanent cumulative loss of vegetation in the local area.

Wildlife

Analysis. Similar to the other alternatives, loss of vegetation could result in minor wildlife population decreases because of the potential loss of habitat. Other impacts relate to wildlife fragmentation and isolation due to the presence of new roadways. Potential long-term losses of habitat would total 10.7 hectares (26.6 ac.).

Cumulative Impacts. Cumulative impacts would be the same as the other alternatives and would result from a new multi-use trail and adjacent parkway construction projects. There could be some minor losses and fragmentation of wildlife habitat.

Conclusion. Vegetation losses would result in a long-term decrease of 10.7 hectares (26.6 ac.) of potential wildlife habitat and minor impacts on wildlife populations. Local parkway and trail projects could result in additional long-term and cumulative losses of wildlife habitat.

Threatened or Endangered Species, or Species of Special Concern

Analysis. Impacts would be the same as the other alternatives, and over the short term clearing could result in diminished habitat for any state-listed species occurring in the project area; additional habitat loss and permanent fragmentation could occur when roadways were complete. Impacts would be either minor or negligible.

Cumulative Impacts. No cumulative effects would occur because of the lack of significant habitat for special status species (the same as the other alternatives).

Conclusion. No federally listed species are found within the project areas. Impacts to Mississippi species of special concern would be negligible to minor because of the potential loss of habitat.

Socioeconomic Environment

Land Use

Analysis. *Consistency with Local Comprehensive Plans* — Under this alternative Old Agency Road would remain open from Highland Colony Parkway to Whippoorwill Lane, and the parkway motor road and Old Agency Road Relocated would be constructed through the project area. All three actions would be consistent with Ridgeland's *Year 2020 Comprehensive Plan* map. As in the revised proposed action and alternatives 2 and 3, Old Agency Road Relocated would be developed from Whippoorwill Lane to Highland Colony Parkway. Alternative 4 would also complement the cultural and historical goals and policies in the *Comprehensive Plan* by providing access to the Choctaw Agency site.

Consistency with the Local Long-Range Transportation Plan — The impacts of alternative 4 would be the same as those described for the other alternatives. The development of both the parkway motor road and Old Agency Road Relocated would be consistent with *The Jackson Urbanized Area's Transportation Plan for the Year 2020* and *The Transportation Plan Update for the City of Ridgeland.* Neither transportation plan indicates whether the existing segment of Old Agency Road through the project area would remain open or closed. Correspondence from the city of Ridgeland (see "Responses to Comments") indicates that the city intended to leave Old Agency Road open through the project area to provide additional capacity for east-west traffic. Currently adopted transportation plans do not yet reflect that intent.

Planned Developments — Impacts would be the same as the other alternatives. There would be no direct impacts on the planned unit residential development at Brame Road and Highland Colony Parkway. Traffic on Brame Road could increase as a result of this development. Plans for an elderly care center near the entrance to the Dinsmor subdivision would not be affected by this alternative. Access to the Dinsmor subdivision, Greenwood Plantation, and Brame Road would be provided from Old Agency Road Relocated, minimizing impacts on local residents and planned developments.

Cumulative Impacts. No cumulative impacts would result from implementing this alternative.

Conclusion. Constructing the Natchez Trace Parkway and Old Agency Road Relocated through the project area would be beneficial because both actions are consistent with Ridgeland's *Year 2020 Comprehensive Plan, The Jackson Urbanized Area's Transportation Plan,* and *The Transportation Plan Update for the City of Ridgeland.* Maintaining Old Agency Road as a collector road from Highland Colony Parkway west would also be beneficial because it is consistent with the *Comprehensive Plan* map. This alternative would complement the *Comprehensive Plan's* cultural and historical goals by providing access to the Choctaw Agency site from the parkway.

Visual Resources

Analysis. Under alternative 4 the following actions could affect visual resources: the construction of the parkway motor road, Old Agency Road Relocated, and a parkway bridge over existing Old Agency Road (which would remain open to traffic).

Densely Wooded Areas — Similar to the other alternatives, clearing for construction of the parkway motor road and Old Agency Road Relocated would affect densely wooded areas (mixed hardwood and pine/oak forest) in the western portion of the project area.

Under this alternative the parkway bridge would cross over existing Old Agency Road on a 30-degree skew, necessitating a longer bridge (103.7 meters [340 ft.]) and requiring that fill embankments be cut back from Old Agency Road in order not to encroach on the roadway (see the conceptual bridge sketch for this alternative on page 26). This would require additional clearance in the vicinity of Dinsmor Crossing and existing Old Agency Road.

There would be a total net loss of approximately 3.7 hectares (9.2 ac.) of densely wooded area, including the canopy of trees along Old Agency Road in the vicinity of the bridge crossing. This would be an adverse, long-term, moderate impact. Efforts would be made to avoid excessive clearing, and some construction areas where trees were removed would be revegetated.

Open Fields — Open fields in the eastern portion of the corridor would be affected by the construction of the parkway motor road (including the bridge) and Old Agency Road Relocated. There would be a net total loss of approximately 7.0 hectares (17.4 ac.) of open fields, the greatest amount of any alternative. This would be a long-term, major impact because open fields provide an important visual contrast to densely wooded areas, which would be permanently lost. Revegetation would be inconsistent with the existing visual characters of open fields.

Views from and to the Parkway — Clearing required for construction of the parkway motor road would potentially open views to residential development in the Windrush and Canterbury subdivisions, as well as views from these developments. Clearing associated with Old Agency Road Relocated could affect views from the Dinsmor subdivision and Greenwood Plantation. Revegetation of disturbed areas would screen some views from adjacent developments, resulting in adverse, short-term, moderate visual impacts.

Clearing for the parkway bridge could affect views from the Windrush subdivision. Because of the longer parkway bridge, the depth of the bridge superstructure would be increased approximately 1 meter (3 ft.). This would result in a taller bridge (7 meters [23 ft.]) than in any other alternative. This would be a long-term, major visual impact.

Visual Experience — Similar to the other alternatives, the visual experience of users would be changed. However, under this alternative Old Agency Road would be retained, and users would still be able to enjoy the character associated with it except in the vicinity of the parkway motor road bridge. Other narrow, tree-canopied, two-lane roads such as Brame Road would be replaced by the much wider road corridors for Old Agency Road Relocated (see typical cross-sections on page 16). This change in the visual experience for local users would be a long-term, moderate impact.

Like the other alternatives, the continuity of the visual experience along the parkway would be enhanced by completing this section of the parkway and by using consistent designs and details, resulting in a long-term, major benefit.

Cumulative Impacts. As described for the other alternatives, construction of a multi-use trail would have a negligible effect on visual resources.

Conclusion. Similar to the other alternatives, visual impacts on mixed-hardwood forests would be adverse, long term, and moderate. This alternative would have the greatest effect on open fields, and the impact would be long term and major. Views of adjacent development from the parkway motor road, as well as views of Old Agency Road Relocated, would be long-term moderate impacts, pending the growth of revegetated areas. Views of a higher and longer parkway bridge over Old Agency Road, particularly from the Windrush subdivision, would be an adverse, long-term, major visual impact. The change in the visual experience for local users would be less than under the other alternatives because

Old Agency Road would remain open, so the impact would be long term and moderate. Like the other alternatives, completing this section of the parkway motor road would improve the continuity of the visual experience, resulting in a long-term, major benefit.

Recreational Users and Facilities

Analysis. As described for the other alternatives, completing this section of the parkway motor road would improve the continuity of the recreational driving experience for parkway users, a long-term, major benefit.

Providing an access road from the parkway motor road to a visitor parking area adjacent to the Choctaw Agency site would facilitate providing interpretive and educational programs for parkway users and local residents, enhancing the visitor experience. This would be a long-term, moderate benefit.

Cumulative Impacts. As described for the other alternatives, the construction of a multi-use trail would accommodate nonmotorized recreational use and minimize conflicts between trail users and vehicular traffic on adjacent roadways. The trail could potentially connect with a network of other trails in the area, providing local residents as well as parkway travelers additional recreational opportunities, such as hiking and bicycling. However, under this alternative trail users would have to cross Old Agency Road, which would continue to carry traffic, creating safety concerns. Mitigation measures could include highlighting the crossing area and removing adjacent vegetation to improve visibility. This would reduce the impact from a moderate to a minor beneficial impact over the long term.

Conclusion. Like the other alternatives, completing this section of the Natchez Trace Parkway would improve the continuity of the recreational driving experience, a long-term, major benefit. Providing access to and parking at the Choctaw Agency site, as described for the revised proposed action and alternatives 2 and 3, would make it easier to provide interpretive and educational programs, enhancing the experience of parkway users and local residents, a long-term, moderate benefit. A multi-use recreational trail would provide local residents and parkway users additional recreational opportunities; trail users would have to cross Old Agency Road, which would continue to carry traffic, changing the impact from a moderate to a minor beneficial impact over the long term.

Local Residents

Analysis. Under alternative 4 the following actions could affect local residents: the construction of the parkway motor road, Old Agency Road Relocated, and a parkway bridge over existing Old Agency Road. This alternative would have different impacts because of retaining Old Agency Road and constructing a long parkway bridge over it.

Community Character — Impacts would be similar to the other alternatives except that maintaining Old Agency Road as a functioning roadway would keep an element of the present setting. Clearing vegetation for the parkway motor road, the bridge over Old Agency Road, and Old Agency Road Relocated, along with introducing urban roadway elements, would have impacts similar to the revised proposed action and alternatives 1 and 3, but the extent of clearing would be greater because of the length and orientation of the bridge. The bridge would be closer to the northern boundary and thus visible from the Windrush subdivision. Increased roadway activity would be a major change from the present character. These would be long-term, major impacts on seclusion and privacy.

Community Qualities — As described for the other alternatives, there would be no effect on community qualities.

Accessibility — Some access to local attractions requiring travel across the project area would be retained on existing Old Agency Road. For these trips minimal out-of-direction travel would be required. However, changes to the Dinsmor access road and Brame Road would require travel across the project area for access to local activities. For example, similar to alternative 2, crossing the corridor from Dinsmor to Richardson Road would require approximately 2.25 kilometers (1.4 mi.) of additional out-of-direction travel (and requiring the use of Highland Colony Parkway). This would be a short-term, minor adverse effect until local users became accustomed to the travel difference.

Similar to alternatives 2 and 3, local access to regional attractions from I-55 would be affected because Old Agency Road Relocated would terminate at Highland Colony Parkway, without a direct connection to I-55 (requiring the use of Highland Colony Parkway to the Old Agency Road intersection). This break in direct access to I-55 would be a long-term, moderate effect on regional accessibility.

Cumulative Impacts. As described for alternative 1, a multi-use trail would offer additional recreational opportunities, potentially improving the quality of life for local residents.

Conclusion. Under this alternative vegetation removal associated with construction, the intrusion of urban standard roadways (including a parkway bridge over Old Agency Road), and the proximity of roadways to established residential subdivisions (Windrush and Dinsmor) would create long-term, major impacts on the community setting, including seclusion and privacy. Recreational opportunities offered by a multi-use trail could improve the quality of life for local residents. Many existing access routes to local destinations across the project area would be retained, requiring minimal out-of-direction travel. There would be a long-term, moderate adverse impact on local access to regional attractions without direct access to I-55 from Old Agency Road Relocated.

Noise

Analysis. Noise impacts would be similar to the other alternatives (see table 29). Even though Old Agency Road would remain open, the distribution of traffic volumes between Old Agency Road, Old Agency Road Relocated, and the parkway motor road would result in the same noise impacts. An increase in noise levels would occur throughout the project area, particularly at east Dinsmor and near Brame Road. A maximum increase of 13 dB(A) by 2020 at east Dinsmor and the highest noise level of 61 dB(A) at the Choctaw Agency site would be in compliance with state guidelines and FHWA noise abatement criteria.

As described in alternative 1, construction noise would also occur in the short-term, but is allowed during daytime hours (6 A.M. to 6 P.M.) according to city noise ordinances.

Cumulative Impacts. Cumulative impacts would be the same as the other alternatives. Additional construction-related noise could occur due to adjacent parkway projects.

Conclusion. The noise impacts would be the same as alternative 1, even though Old Agency Road would remain open from near Whippoorwill Lane to Highland Colony Parkway. Noise levels would increase throughout the project area with negligible to minor increases in the short term and minor to moderate increases in the long term. The greatest increase in long-term noise levels would be 13 dB(A) at the east Dinsmor subdivision, and the highest noise level would be 61 dB(A) at the Choctaw

TABLE 29: PROJECTED NOISE LEVELS, ALTERNATIVE 4

Residential Area or Site	Noise Abatement Criteria (Leq)	Existing Conditions (dB(A))	2003 Projection (dB(A))	2020 Projection (dB(A))
East Windrush	67	47	49	53
West Windrush	67	41	48	52
East Dinsmor	67	42	51	55
West Dinsmor	67	44	50	54
Brame Road	67	37	45	49
Canterbury	67	51	53	55
Greenwood Plantation	67	36	44	47
Choctaw Agency Site	67	53	58	61

Agency site. Neither level would exceed state guidelines or approach the FHWA noise abatement criteria (67 dB(A)).

Unavoidable Adverse Effects

As described for the other alternatives, the loss of historic access to the Greenwood Plantation would be an unavoidable adverse effect.

Approximately 0.7 hectare (1.7 ac.) of riverine and palustrine emergent, scrub/shrub, and forested wetlands would be filled by construction of the parkway motor road and Old Agency Road Relocated. Major long-term adverse impacts would occur in wetland areas 4 and 6, as each wetland area would be reduced in size approximately 35% to 40%, and the remaining wetland sections would be fragmented. Net vegetation losses under alternative 4 would total of 10.7 hectares (26.6 ac.), the most of any alternative.

Because more open fields would be crossed by the parkway motor road, a bridge, and Old Agency Road Relocated, and because more densely wooded areas would be cleared, the adverse impacts on visual resources would be long term and major to moderate. Impacts on the rural setting from vegetative clearing, and the proximity of roadways and a parkway bridge to residential subdivisions, particularly the Windrush subdivision, would be long term and major.

Relationship of Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity

The effects of construction on the parkway's natural and cultural resources, visitor services, and the region's socioeconomic environment would be primarily short term and of moderate impact. The effects of revegetation, which would begin immediately following construction, would be clearly visible for one to two years, and wildlife temporarily displaced by construction would be expected to reoccupy parkway lands near the new roadway once construction was completed.

There would be long-term impacts due to the removal of a large portion of the Greenwood Plantation driveway within the NPS right-of-way. Following construction, the National Park Service would continue to manage parkway lands to preserve the natural and cultural resources and to provide visitor experiences and services consistent with resource management needs.

As described for alternatives 2 and 3, there would be short-term traffic disruption during construction. However, the long-term gain would be the construction of the parkway motor road, allowing visitors direct access to cultural resources.

Short-term impacts related to the proposed construction would also include a negligible increase in both employment opportunities for construction workers and in the revenues generated by construction activities for local businesses and government. Over the long term, however, the proposed development would have a negligible impact on the region's socioeconomic environment.

Irreversible and Irretrievable Commitments of Resources

Even though Old Agency Road would remain open to traffic under this alternative, the construction of an elevated parkway overpass would irretrievably intrude on the historical setting of the Old Natchez Trace. Constructing the parkway motor road and Old Agency Road Relocated would result in the removal of a portion of the Greenwood Plantation driveway, irretrievably altering the historical approach to this property.

Approximately 0.7 hectare (1.7 acres) of wetlands would be filled. Net vegetation losses would total 10.7 hectares (26.5 ac.). Wetland and vegetation losses would be considered irretrievable commitments of resources in the project area. If this alternative was implemented, a statement of findings would be prepared to identify wetland restoration areas for a minimum one-to-one replacement of impacted wetlands.

Like the other alternatives, this alternative would require minor amounts of fossil fuels, labor, and highway construction materials. These resources are not in short supply, and their use would not have an adverse effect on continued availability of these resources. The proposed construction would also result in an irreversible commitment or expenditure, of funds.

IMPACTS OF ALTERNATIVE 5

Transportation/Traffic Impacts

Access

Analysis. Access under alternative 5 would be essentially the same as alternative 1. Closing Old Agency Road from near Whippoorwill Lane to Richardson Road would increase the travel time for local drivers from existing conditions, creating an adverse, minor impact over the short and long term. As described for alternative 1, access to the other local roads and private drives would be only slightly modified. All current movements and travel routes would continue to be accessible, so the effects on access would be negligible for these roads.

No direct local access to the Natchez Trace Parkway would be provided, in accordance with the legislation establishing the parkway. A benefit of this alternative is the addition of access from the parkway motor road to the Choctaw Agency site (the same as all alternatives except 1).

Cumulative Impacts. Completing the parkway motor road through the project area would improve the continuity of interstate recreational travel for parkway users.

Conclusion. Impacts to access would be adverse but minor. While some travel patterns could change, access would still be provided in all travel directions for each local road.

Impact Highlights of Alternative 5

- Moving the bridge location west (compared to alternative 1) would take advantage of the topography that would minimize the height of the bridge and reduce visual impacts to local residents and to travelers on the parkway motor road.
- The bridge would be the second longest, after alternative 4.
- Fewer wetland impacts would occur under this alternative than in any other alternative.

Volumes

Analysis. On the open portion of Old Agency Road east of the transition from Old Agency Road Relocated there would be approximately 10,000 vehicles per day. Approximately 7,000 vehicles per day would continue to access the Canterbury and Windrush subdivisions. Approximately 3,000 vehicles per day (through-traffic from Old Agency Road) would be shifted to Old Agency Road Relocated.

Volumes on the parkway motor road would be the same as the other alternatives. Approximately 7,200 vehicles per day would use the parkway on opening day. The extent of future volume increases would depend on the development of additional east-west commuter routes in the local vicinity.

Cumulative Impacts. Proposed long-range improvements in Ridgeland's *Transportation Plan Update* include constructing additional east-west transportation routes. The implementation of these plans by local or state agencies would increase east-west traffic capacity for commuters, potentially minimizing the growth in commuter traffic along the parkway motor road through Ridgeland (including the project area).

Conclusion. Volume impacts would be beneficial and minor because some residential traffic and all through-traffic would be rerouted from Old Agency Road to Old Agency Road Relocated. Only residents north of the project area would continue to use Old Agency Road east of the entrance to St. Andrew's School. Traffic volumes on the parkway on opening day would be approximately 7,200 vehicles.

Safety

Analysis. Impacts would be the same as alternative 1. Relocating the access points at Dinsmor and Brame Road would mitigate safety issues by improving sight distances and reducing accident potential. Reconfiguring the intersection at Richardson Road and Old Agency Road would reduce vehicular conflicts, also improving safety. While Old Agency Road would remain unimproved east of Richardson Road, improvements at the intersection with the relocated roadway should improve overall safety of the road. If the city of Ridgeland, in cooperation with the National Park Service and the Mississippi Department of Archives and History, improved Old Agency Road east to Highland Colony Parkway, safety would be enhanced on this portion of the roadway. There would be a minor impact to emergency vehicle response times because the new road connection to Brame Road from Old Agency Road Relocated would create a more circuitous route.

Cumulative Impacts. No safety-related cumulative impacts were identified.

Conclusion. Safety would be moderately improved by reconfiguring intersections and constructing new access points that previously had poor sight distances. Portions of Old Agency Road with safety concerns would remain unimproved. Minor adverse impacts in emergency response times could occur for residents along Brame Road and at Greenwood Plantation because of the new access from Old Agency Road Relocated.

Cultural Resource Impacts

Historic Resources

Analysis. As described for the revised proposed action and alternatives 1, 2, and 3, the parkway motor road crossing of the Old Natchez Trace would be approximately at grade, resulting in an adverse, moderate effect because of the physical disturbance associated with truncating the road segment. Restoring this portion to Old Trace appearances and interpreting it for the public would mitigate the adverse effect. Closing a 0.7 kilometer (0.4 mi.) portion of Old Agency Road to vehicular traffic from near Whippoorwill Lane to Richardson Road would substantially alter the road's historical patterns of circulation and continuous use, also an adverse, moderate effect.

As described for the other alternatives, removing a portion of the Greenwood Plantation driveway within the NPS right-of-way would have an adverse, moderate effect as a result of irretrievably altering the historical approach to this property. To mitigate this effect, photo-documentation would provide an archival record of the driveway's current character-defining attributes. The National Park Service would work with the landowner to retain as much of the historical character of the property as possible and to screen the property from the parkway through the use vegetation.

Cumulative Impacts. As described for the revised proposed action and alternatives 1, 2, and 3, closing and removing a portion of Old Agency Road (Old Natchez Trace) would represent an incremental loss of historical patterns of circulation and continuous use. While sections of Old Agency Road would remain open outside the project area, the current experience motorists driving along the extended road corridor would be substantially diminished.

Conclusion. As described for the revised proposed action and alternatives 1 and 2, the parkway motor road crossing of the Old Natchez Trace approximately at grade would truncate this segment of the trace, an adverse, moderate effect. Restoring a 0.7 kilometer (0.4 mi.) portion of Old Agency Road (Old Natchez Trace) to historical appearances and interpreting it would mitigate this effect. Closing a portion of Old Agency Road to vehicular traffic within the NPS right-of-way would substantially alter historical patterns of circulation and continuous use. Removing a portion of the Greenwood Plantation driveway would irretrievably alter the historical approach to this property.

Archeological Resources

Analysis. As described for the other alternatives, the potential for inadvertent discoveries of archeological resources in the construction zone could be high because of its proximity to the Choctaw Agency site. While the site would be avoided, archeological monitoring would be required during construction to ensure protection. Any inadvertent archeological discoveries would result in consultation with the Choctaw Tribe in accordance with the memorandum of understanding that is being developed between the National Park Service and the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana.

As described for all alternatives except alternative 1, the National Park Service would ensure that adequate security measures (including park patrols, surveillance, fencing, and educational outreach programs) were implemented before interpretive site development and public programs were initiated at the Choctaw Agency site. The access road would be designed to minimize disturbance to the cultural setting of the area. Providing direct access from the parkway motor road would allow the area to be more easily monitored.

Also as described for all alternatives except alternative 1, interpretive design and development for the Choctaw Agency site would be accomplished in consultation with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw. These groups would also be consulted in the development of new parkway interpretive materials to ensure that they were more accurate and inclusive of Native Americans' viewpoints.

Other archeological sites in the project area are early to mid 20th century and have been determined ineligible for the National Register of Historic Places due to the lack of historical integrity and significance, and no adverse effects on significant archeological information would be expected.

Cumulative Impacts. No cumulative impacts on archeological resources were identified.

Conclusion. As described for the other alternatives, the Choctaw Agency site would be avoided by construction. Any inadvertent archeological discoveries would result in consultation with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana to ensure appropriate mitigation. As described for all alternatives except alternative 1, the National Park Service would undertake appropriate site protection measures to avoid or mitigate potential adverse effects related to public visitation before opening the site to interpretation. The Choctaw Nation and other tribal representatives would be contacted to help develop new parkway interpretive materials that were accurate and inclusive of Native Americans' viewpoints.

Natural Resources

Air Quality

Analysis. Peak-hour traffic volumes on Old Agency Road between Richardson Road and Highland Colony Parkway under alternative 5 are projected to be 1,125 vehicles in 2003 and 2,100 vehicles in 2020, the same as alternative 1 (see table 30). Based on these volumes and speeds of 40 kph (25 mph), the CO screen determined that the critical distance would be less than 3.1 meters (10 ft.) in 2003 and 5.9 meters (18 ft.) in 2020. National ambient air quality standards would not be exceeded, and air quality impacts would be negligible.

Cumulative Impacts. Traffic volumes on other roadways throughout the project area would continue to increase as population increased. However, the cumulative effects of the combined traffic volumes are not expected to exceed national ambient air quality standards for carbon monoxide.

Conclusion. Alternative 5 would have a negligible impact on air quality over the short and long term. National ambient air quality standards for carbon monoxide would not be exceeded. No mitigation measures would be required with this alternative.

TABLE 30: AIR QUALITY DATA SUMMARY, ALTERNATIVE 5

Year	Average Speed	Design-Hour Traffic Volumes	Critical Distance	Closest Receptor
2003	40 kph (25 mph)	788	<3.1 m (<10 ft.)	Approx. 30.5 m (100 ft.)
2020	40 kph (25 mph)	2,100	5.9 m (18 ft.)	Approx. 30.5 m (100 ft.)

Soils

Analysis. As described for the other alternatives, mitigating measures would be taken where road alignments crossed soils classified as silt loams that have low strength for streets and roads. Soil erosion would result from the clearing of some vegetation from the project area, exposing project soils to erosive water and wind action. Some soils could be enhanced and improved with the removal of roads and the restoration of vegetation. A soil erosion control plan would be prepared and implemented (see page 32).

Long-term and negligible effects on project area soils would include excavation, the mixing of soil horizons, and the addition of aggregate fill and road surface pavement over existing soils. The exact amount of soil that would be excavated is unknown; however, the vegetation impacted by construction under this alternative would total 11.3 hectares (27.8 ac.), indicative of the surface acreage of soils that would be affected.

Cumulative Impacts. No cumulative impacts were identified under this alternative.

Conclusion. Long-term, negligible impacts would occur to project area soils due to excavation. Mitigation efforts would be undertaken to prevent soil erosion and to address the expansive characteristics of local soils (the same as the other alternatives).

Wetlands

Analysis. A total of 0.5 hectare (1.4 ac.) of riverine and palustrine wetlands would be permanently filled by constructing the parkway motor road, Old Agency Road Relocated, and a new access road to Brame Road and Greenwood Plantation from Old Agency Road Relocated. Table 31 identifies the potential adverse or beneficial impacts to wetland areas 1 through 10.

Impacts to wetlands would be the same as alternative 1, except for wetland area 8. Similar to alternative 1, this wetland would be intersected in several locations by the parkway motor road and Old Agency Road Relocated. Approximately 0.1 hectare (0.3 ac.) would be permanently filled in wetland 8, resulting in a 25% loss of the wetland and further fragmentation of wetland plant communities.

Based on the NPS wetland protection guidelines *(DO 77-1: Wetland Protection)*, a statement of findings would be required to implement this alternative because of adverse impacts to wetlands. Suitable wetland restoration areas would need to be identified to provide a minimum of one-to-one replacement for wetlands that were adversely impacted.

TABLE 31: WETLAND IMPACTS, ALTERNATIVE 5

Wetland	Size of Wetland Affected	Percentage of Wetland Area Affected	Impact Intensity and Direction
1	0	0	No impact
2	<0.01 ha (<0.01 ac)	0.3	Negligible adverse
3	0	0	No impact
4 and 6	0.4 ha (1.1 ac)	40	Major adverse
5	0	0	Minor beneficial
7	0	0	Minor beneficial
8	0.1 ha (0.3 ac)	25	Major adverse
9	0	0	No impact
10	0	0	No impact

Cumulative Impacts. Cumulative impacts would be the same as for the other alternatives.

Conclusion. Similar to alternative 1, approximately 0.5 hectare (1.4 ac.) of wetlands would be permanently filled to construct new roads. Negligible adverse impacts would occur to wetland area 2. Long-term major adverse impacts would occur in wetland areas 4, 6, and 8; each wetland area would be reduced in size by at least 25%, and the remaining wetland sections would be fragmented. No adverse impacts would occur to the remaining wetland areas (1, 3, 5, 7, 9, and 10). Removing portions of Old Agency Road and other access roads could provide opportunities to improve wetland systems in areas 5 and 7.

Developing the remaining sections of the parkway motor road to the west would result in an additional loss of 0.6 hectare (1.5 ac.) and a cumulative wetland impact of 1.2 hectare (3.0 ac.).

Water Quality

Analysis. As described for the other alternatives, potential impacts to water quality from construction of the parkway motor road and Old Agency Road Relocated would occur in the same areas as described under "Wetlands." Constructing the parkway motor road and Old Agency Road Relocated would cause short-term, negligible adverse impacts on the water quality of the small, unnamed tributaries of White Oak Creek and Purple Creek. Mitigating measures would be taken to reduce impacts (see page 32).

Anticipated traffic volumes on the Natchez Trace Parkway and Old Agency Road Relocated would be less than 30,000 vehicles per day. Water quality impacts caused by highway runoff would be long-term, but negligible.

Water runoff from the road surfaces, embankments, and other parkway elements would be directed through culverts and other water drainage structures. The local surface-water drainage patterns would not change, although stormwater discharge could increase. The restoration of Old Agency Road and of access roads within the project area would allow the enhancement or reestablishment of historic drainage patterns.

Conclusion. Short-term and negligible adverse impacts would occur to water quality caused by construction activity releasing soil and debris into unnamed streams. Stormwater discharged into local streams could result in long-term, minor impacts from increased peak flows. The restoration or revegetation of removed and relocated roads could benefit local hydrologic and drainage patterns.

Vegetation

Analysis. Actions in this alternative would be similar to those in alternative 1, but portions of Old Agency Road Relocated and the Brame Road connector would be in different locations, and a new access road and parking lot would be provided to the Choctaw Agency site. Similar to alternative 1, Old Agency Road would be restored to Old Trace appearances. Portions of Brame Road and portions of the access roads to the Dinsmor subdivision and Greenwood Plantation (north of Old Agency Road Relocated) would be obliterated.

Table 32 identifies vegetation impacts and restoration opportunities for alternative 5 by vegetation type. Impact intensities for each vegetation type would be the same as alternative 1; only the number of hectares lost would vary because of some deviations in road locations and the amount of roadway

TABLE 32: VEGETATION IMPACTS, ALTERNATIVE 5

	Vegetation Loss for New Roads	Revegetation		
Vegetation Type		Old Agency Road	Other Roads	Net Loss
Mixed Hardwood	0.8 ha (2.0 ac.)	*0*	*0*	0.8 ha (2.0 ac.)
Pine/Oak	4.2 ha (10.3 ac.)	*0.1 ha (0.3 ac.)*	*0.5 ha (1.1 ac.)*	3.6 ha (8.9 ac.)
Late Successional Fields	4.2 ha (10.2 ac.)	*1.5 ha (3.6 ac.)*	*0.1 ha (0.2 ac.)*	2.6 ha (6.4 ac.)
Agricultural Fields	2.1 ha (5.2 ac.)	*0*	*0*	2.1 ha (5.2 ac.)
Net Total	**11.3 ha (27.8 ac.)**	***1.6 ha (3.9 ac.)***	***0.6 ha (1.3 ac.)***	**9.1 ha (22.5 ac.)**

Note: Italicized numbers represent areas restored or replanted with native vegetation.

restored. While individually these impacts would most likely be minor to moderate, collectively the loss of 9.1 hectares (22.5 ac.) of vegetation would be moderate to major because it would be permanent, highly noticeable, and substantial within the boundaries of the project area.

Mixed-Hardwood Forest — Impacts would be the same as alternative 1; a long-term net loss of 0.8 hectare (2.0 ac.) of mixed-hardwood forest would occur.

Pine/Oak Forest — Long-term net losses of 3.6 hectares (8.9 ac.) of pine/oak forest would be removed, the most of any alternative.

Late Successional Fields — Impacts would be the same as alternative 1; a long-term net loss of 2.6 hectares (6.4 ac.) of late successional fields would occur.

Agricultural Fields — Long-term impacts to agricultural fields would total 2.1 hectares (5.2 ac.).

Cumulative Impacts. Cumulative impacts would be the same as the other alternatives. Additional vegetation losses would occur within the project area because of the multi-use trail and other parkway projects.

Conclusion. The development of new roads would result in the loss of approximately 11.3 hectares (27.8 ac.) of vegetation. The removal of some existing roads, including portions of Old Agency Road, Brame Road, and access roads to the Dinsmor subdivision and Greenwood Plantation, would allow for the restoration or revegetation of approximately 2.2 hectares (5.2 ac.). The long-term impact would be moderate to major within the project area, with a net loss of 9.1 hectares (22.5 ac.) of vegetation. The construction of a multi-use trail within the parkway motor road and other parkway projects to the east and west would cause permanent cumulative losses of vegetation in the local area.

Wildlife

Analysis. As discussed for the other alternatives, the loss of vegetation in this alternative could result in minor wildlife population decreases because of the loss of potential habitat. Other impacts relate to wildlife fragmentation and isolation due to the development of new roadways. Potential long-term losses of wildlife habitat would total 9.1 hectares (22.5 ac.).

Cumulative Impacts. Cumulative impacts would be the same as the other alternatives. Vegetation losses associated with a new multi-use trail could result in some minor losses and fragmentation of wildlife habitat.

Conclusion. Vegetation losses would result in a potential long-term decrease of 9.1 hectares (22.5 ac.) of wildlife habitat and minor impacts on wildlife populations. Local parkway and trail projects could also result in additional long-term and cumulative losses of wildlife habitat.

Threatened or Endangered Species, or Species of Special Concern

Analysis. Impacts would be the same as the other alternatives, and over the short term clearing could result in diminished habitat for any state-listed species occurring in the project area; additional habitat loss and permanent fragmentation could occur when roadways were complete. Impacts would be either minor or negligible.

Cumulative Impacts. No cumulative effects would occur because of the lack of significant habitat for special status species (the same as the other alternatives).

Conclusion. As described for the other alternatives, no federally listed species are found within the project area. Impacts to Mississippi species of special concern would be negligible to minor because of the potential loss of habitat.

Socioeconomic Environment

Land Use

Analysis. *Consistency with Local Comprehensive Plans* — Impacts would be the same as described for the other alternatives. The development of the parkway motor road and Old Agency Road Relocated is consistent with Ridgeland's *Year 2020 Comprehensive Plan* map, which shows the Natchez Trace Parkway and Old Agency Road Relocated through the project area. However, the closure of Old Agency Road from Richardson Road to Whippoorwill Lane is not consistent with the map. Highland Colony Parkway could be affected by a new intersection at Old Agency Road Relocated. Alternative 5 would also complement the cultural and historical goals and policies in the *Comprehensive Plan* by providing access to the Choctaw Agency site. (This differs from alternative 1, where no access would be provided.)

Consistency with Local Transportation Plans — The construction of the parkway motor road and Old Agency Road Relocated would be consistent with *The Jackson Urbanized Area's Transportation Plan for the Year 2020* and *The Transportation Plan Update for the City of Ridgeland.* The Jackson plan identifies the completion of the Natchez Trace Parkway from I-55 west through the project area; the Ridgeland plan identifies the relocation of the Old Agency Road in the next 5–10 years. Neither transportation plan indicates whether the existing segment of Old Agency Road through the project area would remain open or closed.

Planned Developments — Impacts would be the same as for the other alternatives. Alternative 5 would not have direct impacts on the planned unit residential development at Brame Road and Highland Colony Parkway because the main access would be by way of Highland Colony Parkway to the south. Increased traffic could occur on Highland Colony Parkway. Plans for an elderly care center near the entrance to the Dinsmor subdivision would not be impacted by this alternative. Access to the Dinsmor subdivision, Greenwood Plantation, and Brame Road from Old Agency Road Relocated would be provided, minimizing impacts to local residents and planned developments.

Cumulative Impacts. No cumulative impacts would result from implementing this alternative.

Conclusion. Constructing the Natchez Trace Parkway and Old Agency Road Relocated through the project area would be beneficial because both actions would be consistent with Ridgeland's *Year 2020 Comprehensive Plan, The Jackson Urbanized Area's Transportation Plan,* and the *Transportation Plan Update for the City of Ridgeland.* The future use of Old Agency Road through the project area is not identified in either transportation plan. The closure of a portion of Old Agency Road would not be consistent with the *Comprehensive Plan* map. In contrast, the provision of access to the Choctaw Agency site from the parkway would complement the *Comprehensive Plan's* cultural and historical goals.

Visual Resources

Analysis. Under alternative 5 the following actions could affect visual resources: the construction of the parkway motor road, Old Agency Road Relocated, an Old Agency Road Relocated bridge over the parkway, and a road connecting Brame Road and Old Agency Road Relocated; plus the closure and restoration of Old Agency Road to Old Trace appearances from near Whippoorwill Lane to Richardson Road.

Densely Wooded Areas — Clearing for the parkway motor road, Old Agency Road Relocated, and the connecting road between Brame Road and Old Agency Road Relocated would affect densely wooded areas in the western portion of the project area, creating a large, open swath. The Old Agency Road Relocated bridge would be east of Richardson Road, where the parkway motor road would cut through a rise in the topography, so that the bridge deck elevation would be near the existing ground elevation, allowing for a low-profile bridge. The bridge would cross over the parkway on a 45-degree skew, requiring a relatively long bridge of 99 meters (325 ft.). The parkway motor road would be depressed within a cut section, with additional clearing required for cut slopes and some limited fill embankments at the bridge abutments (see the conceptual bridge sketch for this alternative on page 29).

There would be a net loss of approximately 4.4 hectares (10.9 ac.) of mixed-hardwood and pine/oak forest, an adverse, long-term, moderate visual impact. Efforts would be made during construction to avoid excessive clearing, and revegetation would occur at some construction areas.

Open Fields — Construction would affect open fields within the central and eastern portions of the project area. A net total of approximately 4.7 hectares (11.6 ac.) would be impacted, a long-term, major impact. Revegetation of open field areas would be inconsistent with their existing visual character. The contrast to the densely wooded areas provided by open fields would be permanently lost.

Views from and to the Parkway — Vegetation clearing required for constructing the parkway motor road would potentially open views to residential development in the Windrush and Canterbury subdivisions. A portion of Old Agency Road Relocated could also be visible from the Dinsmor and Canterbury subdivisions, as well as Greenwood Plantation. Revegetation of disturbed areas would screen some views, resulting in short-term, moderate visual impacts.

Where the parkway passed under Old Agency Road Relocated, it would be in a 3.9 to 4.6 meter (12.8 to 15.1 ft.) road cut in an area of rising topography. The bridge would be placed on low earthen fill, approximately 2 meters (6.6 ft.) above existing ground elevation. Revegetation of the fill embankments and cut slopes would screen most views of the low bridge and parkway. The overall visual effect would be a short-term, moderate impact.

Visual Experience — As described for the other alternatives, the visual experience of users of both local roads and the parkway would be changed. The narrow, tree-canopied, two-lane Old Agency Road would be replaced by a much wider Old Agency Road Relocated (see the typical cross-sections on page 16). The loss of this visual experience would be a long-term, major impact.

Completing this section of the parkway motor road, along with using consistent designs and details, would enhance the continuity of the viewing experience along the length of the parkway, a long-term, major benefit for users.

Cumulative Impacts. As described for the other alternatives, a multi-use trail would have a negligible effect on visual resources.

Conclusion. Similar to the other alternatives, under alternative 5 impacts on densely wooded areas would be adverse, long-term, and moderate; impacts on open fields would be long term and major. Views from the parkway toward adjacent developed areas, as well as views of the parkway and Old Agency Road Relocated, would be short-term, moderate impacts until vegetation planted in disturbed areas matured. With the revegetation of fill embankments and cut slopes, views of the low-profile crossing of the parkway motor road by Old Agency Road Relocated would be screened, resulting in a short-term, moderate visual impact. Changes to the visual experience of users of local roads would be adverse, long term, and major. Like the other alternatives, completing this section of the parkway motor road would improve the overall continuity of the viewing experience, resulting in a long-term, major benefit for parkway users.

Recreational Users and Facilities

Analysis. As described for the other alternatives, completing this section of the parkway motor road would improve the continuity of the driving experience along the Natchez Trace Parkway, a long-term, major beneficial impact.

Like alternatives 2, 3, and 4, an access road would be provided from the parkway motor road to a visitor parking area adjacent to the Choctaw Agency site. This would make it easier to offer interpretive and educational programs at the site, a long-term, moderate benefit.

Cumulative Impacts. As described for the other alternatives, the construction of a multi-use recreational trail would accommodate nonmotorized recreational use and minimize conflicts between trail users and vehicular traffic on adjacent roadways. The trail could potentially connect with a network of other trails in the area, providing local residents as well as parkway travelers additional recreational opportunities, such as hiking and bicycling. This would provide a long-term, moderate benefit.

Conclusion. As described for the other alternatives, completing this section of the Natchez Trace Parkway would improve the continuity of the recreational driving experience, a long-term, major benefit. As described for all the other alternatives except 1, providing access to and parking at the Choctaw Agency site would make it easier to offer interpretive and educational programs, enhancing opportunities for parkway users and local residents, a long-term, moderate benefit. Like the other alternatives, a multi-use recreational trail would provide local residents as well as parkway users additional recreational opportunities, a long-term, moderate benefit.

Local Residents

Analysis. Under alternative 5 the following actions could affect local residents: the construction of the parkway motor road, Old Agency Road Relocated, a bridge crossing by Old Agency Road Relocated over the parkway motor road, and a connecting road between Brame Road and Old Agency Road Relocated; plus the closure and restoration of Old Agency Road to Old Trace appearances

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between Whippoorwill Lane and Richardson Road. As a result, this alternative would have impacts similar to alternative 1.

Community Character — As described for alternative 1, clearing mature trees and understory vegetation to construct both the parkway and Old Agency Road Relocated could affect the secluded character so desired by local residents. This clearing, combined with the proximity of Old Agency Road Relocated, would affect residents along the northern edge of the Dinsmor subdivision and the character of the entry to the subdivision for all residents. Some disturbed areas would be revegetated. Excessive clearing would be limited. This loss of mature vegetation would be a short-term, moderate impact to seclusion and privacy.

Under this alternative the parkway motor road would be cut into a rise in the topography, allowing an approximately at-grade crossing by Old Agency Road Relocated over the parkway and substantially reducing the extent of intrusion on the privacy of adjacent residential subdivisions compared to the bridge proposed under alternative 4. Embankments would be revegetated to mitigate the extent of tree clearance. This would be a short-term, minor adverse impact.

Community Qualities — As described for the other alternatives, there would be no effect on community qualities under this alternative.

Accessibility — Approximately 0.3 kilometer (0.2 mi.) of additional out-of-direction travel would be required between Dinsmor subdivision and Richardson Road for access to local activities. This impact would be short-term and minor until local travelers adjusted to the differences. Impacts on access to Greenwood Plantation and uses along Brame Road would be similar to alternative 1. Access to regional attractions would not be affected.

Cumulative Impacts. As described for the other alternatives, a multi-use trail would offer additional recreational opportunities, potentially improving the quality of life for local residents.

Conclusion. Similar to alternative 1, actions under this alternative would lead to short-term, adverse impacts on local residents. Impacts would include the introduction of urban standard roadways (Old Agency Road Relocated and bridge, and the Brame Road connection) with wide cleared areas. A multi-use trail could improve the quality of life for local residents. The amount of out-of-direction travel for local access would be a short-term, minor impact until local travelers became accustomed to the differences. Access to regional attractions would not be affected.

Noise

Analysis. Noise impacts would be similar to the other alternatives. Shifts in traffic volumes with the partial closure of Old Agency Road to vehicular traffic and the development of Old Agency Road Relocated would be similar to alternative 1, resulting in similar traffic-related noise impacts. Even though the parkway motor road would cross under Old Agency Road Relocated in a 3.9 to 4.6 meter (12 to 14 ft.) depression, the effects on noise are expected to be minimal.

As described for alternative 1 and presented in table 33, negligible to minor increases in noise levels would occur in the short-term (2–9 dB(A)); minor to moderate increases would occur in the long term (4–13 dB(A)). The smallest increases would occur in vicinity of the Choctaw Agency site, the Canterbury subdivision, and the east Windrush subdivision because of the high volume of traffic noise that currently occurs in these areas. The largest increases would be at the Dinsmor and west Windrush subdivisions, along Brame Road, and at Greenwood Plantation because of the proximity of both the

TABLE 33: PROJECTED NOISE LEVELS, ALTERNATIVE 5

Residential Area or Site	Noise Abatement Criteria (Leq)	Existing Conditions (dB(A))	2003 Projection (dB(A))	2020 Projection (dB(A))
East Windrush	67	47	49	53
West Windrush	67	41	48	52
East Dinsmor	67	42	51	55
West Dinsmor	67	44	50	54
Brame Road	67	37	45	49
Canterbury	67	51	53	55
Greenwood Plantation	67	36	44	47
Choctaw Agency Site	67	53	58	61

parkway motor road and Old Agency Road Relocated. By 2020 increased traffic volumes on these two roads would result in a potential 10–13 dB(A) increase in noise levels, which would not exceed state guidelines. Similarly, the highest noise level of 61 dB(A) at the Choctaw Agency site would be below FHWA noise abatement criteria (67 dB(A)).

Cumulative Impacts. Cumulative impacts would be the same as alternative 1. Additional noise could occur due the construction of adjacent parkway projects.

Conclusion. Noise impacts would be essentially the same as the other alternatives. Increased noise levels would be negligible to minor in the short term and minor to moderate in the long term. By 2020 a 13 dB(A) increase in noise levels would result in the east Dinsmor subdivision. The highest noise level of 61 dB(A) would occur at the Choctaw Agency site. The increase in noise levels would not exceed state guidelines, and all noise levels would be less than the FHWA noise abatement criteria for residential and park areas (67 dB(A)).

Unavoidable Adverse Effects

Similar to the previous alternatives, the parkway motor road crossing of the Old Natchez Trace approximately at grade would truncate this segment of the trace, an adverse, moderate effect. Closing 0.7 kilometer (0.4 mi.) of Old Agency Road to vehicular traffic would adversely affect historical patterns of circulation and continuous use. The loss of a portion of the historical Greenwood Plantation driveway would be an unavoidable, adverse effect.

Approximately 0.5 hectare (1.4 acre) of wetlands would be permanently filled to construct new roads. Long-term, major adverse impacts would occur in wetland areas 4, 6, and 8; each wetland area would be reduced in size by at least 25%, and the remaining wetland sections would be fragmented. A net total of 9.1 hectares (22.5 ac.) of vegetation would be impacted under this alternative.

New roads would traverse existing open fields and require clearing in densely wooded areas, resulting in long-term and major to moderate impacts on these visual resources. Where revegetation of disturbed areas could not screen views of the parkway motor road, the bridge over the parkway motor road, or Old Agency Road Relocated, the adverse visual impacts would be long term and moderate. Actions under alternative 5 would lead to short-term, moderate adverse impacts on the existing character, including vegetation clearance and the intrusion of nonrural roadways and a bridge into the rural setting. Changes to the visual experience of users of local roads would be long term and major.

Relationship of Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity

The effects of construction on the parkway's natural and cultural resources, visitor services, and the region's socioeconomic environment would be primarily short term and of moderate impact. The effects of revegetation, which would begin immediately following construction, would be clearly visible for one to two years, and wildlife temporarily displaced by construction would be expected to reoccupy parkway lands near the new roadway once construction was completed.

There would be some long-term, permanent impacts to a 0.7 kilometer (0.4 mi.) portion of Old Agency Road (Old Natchez Trace), which would be closed to vehicular traffic and restored to Old Trace appearances, and the Greenwood Plantation driveway, which would be closed and revegetated. Following construction, the National Park Service would continue to manage parkway lands to preserve natural and cultural resources and to provide visitor experiences and services consistent with resource management needs.

There would be short-term traffic disruption during construction. However, the long-term gain would be the construction of Old Agency Road Relocated and portions of new, safer, and improved roads connecting Brame Road and the Greenwood Plantation driveway. In addition, the construction of the parkway motor road would allow visitor experiences and services consistent with resource management needs.

Short-term impacts related to the proposed construction would also include negligible increases in both employment opportunities for construction workers and in the revenues generated by construction activities for local businesses and government. Over the long term, however, the proposed development would have a negligible impact on the region's socioeconomic environment.

Irreversible and Irretrievable Commitments of Resources

Alternative 5 would cause irretrievable moderate adverse impacts as a result of closing a 0.7 kilometer (0.4 mi.) portion of Old Natchez Trace (Old Agency Road) to vehicular traffic. Historical patterns of circulation and use would be lost. The removal of a portion of the Greenwood Plantation driveway would irretrievably alter the historic approach to this property.

Under this alternative 0.5 hectare (1.4 ac.) of wetlands would be permanently filled to construct new roads, and approximately 9.1 hectares (22.5 ac.) of vegetation would be lost. Vegetation and wetland losses would be considered irretrievable commitments of resources. If this alternative was implemented, a wetland statement of findings would be prepared to identify wetland restoration areas for a minimum one-to-one replacement of impacted wetlands.

Like the other alternatives, this alternative would require minor amounts of fossil fuels, labor, and highway construction materials. These resources are not in short supply, and their use would not have an adverse effect on continued availability of these resources. The proposed construction would also result in an irreversible commitment or expenditure, of funds.

COMPLIANCE WITH FEDERAL AND STATE LAWS, EXECUTIVE ORDERS, AND REGULATIONS

This *Final Supplemental Environmental Impact Statement* for project 3P13 of the Natchez Trace Parkway discloses the planning and decision-making process and potential environmental consequences of the alternatives proposed. The environmental analysis was prepared in accordance with the Council on Environmental Quality's regulations pertaining to implementing the provisions of the National Environmental Policy Act (NEPA). These regulations are contained at 40 CFR 1500 et seq.; additional regulations are contained in part 516 of the U.S. Department of the Interior's *Departmental Manual.*

The final statement will be distributed, and after a 30-day no-action period, a record of decision will be prepared to document the selected alternative and set forth any stipulations for implementing this construction plan, thus completing the NEPA process.

GENERAL LEGISLATION AND REGULATIONS

Executive Order 12898 — "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." Under a policy established by the secretary of the interior to comply with this executive order, departmental agencies should identify and evaluate, during the scoping and/or planning processes, any anticipated direct or indirect effects on minority and low-income populations and communities, including the equity of the distribution of the benefits and risks. No such impacts were identified.

Architectural Barriers Act of 1968 (42 USC 4151 et seq.); Rehabilitation Act of 1973 (29 USC 701 et seq.); and the Americans with Disabilities Act of 1990 (PL 101-336, 104 Stat. 327). These acts require that all facilities and programs be made as accessible as possible to disabled visitors. Because the development of this parkway motor road and Old Agency Road have no components that would not be accessible, construction would be in compliance with these acts. At the Choctaw Agency site all facilities would comply with these acts.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1986, under the Superfund Amendment Reauthorization Act (SARA). Section 120 of this act specifies that CERCLA is applicable to federal facilities. No known hazardous or toxic contaminants would be disturbed under any of the proposed alternatives for constructing the parkway terminus.

CULTURAL RESOURCES

The National Park Service is mandated to preserve and protect its cultural resources under the Organic Act of 1916 (16 USC 1) and such specific legislation as the Antiquities Act of 1906 (16 USC 431), the National Historic Preservation Act of 1966, as amended (16 USC 470), the National Environmental Policy Act of 1969, as amended (42 USC 4321, 4331, 74332), the Archeological Resources Protection Act of 1979 (16 USC 470), and the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001). In addition, the management of cultural resources would be guided by the Advisory Council on Historic Preservation's implementing regulations regarding "Protection of Historic Properties" (36 CFR 800), the "Secretary of the Interior's Standards and

Guidelines for Archeology and Historic Preservation" (48 FR 48:44716–40), NPS *Management Policies* (chapter 5), and the *DO-28: Cultural Resources Management Guideline*.

As part of its cultural resource management responsibilities, the National Park Service strives to identify and evaluate the significance of all cultural resources on lands under its jurisdiction. Section 110 of the National Historic Preservation Act requires that historic properties be identified and evaluated for their eligibility for listing on the National Register of Historic Places. Section 110 also stipulates that historic properties be managed in a way that preserves and protects their values, especially nationally significant values. Cultural resources under NPS jurisdiction, as well as those not under the jurisdiction of the Natchez Trace Parkway but that could be affected by actions outlined in this plan, were considered during this planning process.

Section 106 of the National Historic Preservation Act requires that federal agencies having direct or indirect jurisdiction over undertakings consider the effect of those undertakings on resources either listed on or eligible for listing on the National Register of Historic Places, and it affords the Advisory Council on Historic Preservation and the state historic preservation officer, tribal representatives, and other concerned parties the opportunity to comment. The National Park Service will continue to work with the aforementioned entities to meet the requirements of section 106. The Mississippi state historic preservation officer and the Advisory Council on Historic Preservation were invited to participate during the planning process, and each had an opportunity to review and comment on the draft document.

The National Park Service will consult with affiliated Native American tribes, as required by the above laws and regulations, and will develop and accomplish its programs in a way that respects the beliefs, traditions, and other cultural values of the Native American tribes who have ancestral ties to the lands that the Natchez Trace Parkway traverses. The National Park Service will also comply with the provisions of the Native American Graves Protection and Repatriation Act, which require specific actions when Native American human remains, funerary objects, sacred objects, or objects of cultural patrimony are excavated or discovered on federal lands.

NATURAL RESOURCES

National Environmental Policy Act of 1969. This act sets forth the federal policy to preserve important historic, cultural, and natural aspects for our national heritage. It requires federal agencies to use a systematic, interdisciplinary approach that integrates natural and social sciences in planning and making decisions about actions that may impact the human environment. This *Final Supplemental Environmental Impact Statement* was prepared pursuant to this act and its implementing regulations and guidelines. Implementing this plan would require ongoing compliance with the National Environmental Policy Act.

Analysis of Impacts on Prime and Unique Agricultural lands in Implementing the National Environmental Policy Act (45 FR 59189). Road construction activities — such as clearing, grading, filling, and removing soils; creating embankments; constructing bridges and new roads — would cause farmlands to be permanently removed from production. NPS *Management Policies* and guidelines require that impacts on prime and unique farmlands be examined.

Additionally, the Farmland Protection Policy Act, which was passed as part of the 1981 federal bill and became effective on August 6, 1984, requires all federal agencies to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. It also ensures that federal programs are administered in a manner that, to the extent practicable, is compatible with state and local government and private programs and policies protecting farmland. Prime farmlands are defined as those lands whose value derives from their general advantage as cropland due to soil and water conditions and that produce general crops such as common foods, forage, fiber, and oil seed. Unique farmlands are defined as those whose value derives from their particular advantage for growing specialty crops, such as fruits, vegetables, and nuts.

After consulting with the U.S. Department of Agriculture's Natural Resources Conservation Service, the National Park Service concluded that there would be no effect on prime or unique farmlands, or on farmlands of state importance.

Clean Air Act, As Amended (42 USC 7401 et seq.). The Natchez Trace Parkway is designated a class II clean air area. Maximum allowable increases of sulfur dioxide, particulate matter, and nitrogen oxides beyond baseline concentrations established for class II areas cannot be exceeded. Section 118 of the Clean Air Act also requires all federal facilities to comply with federal, state, and local air pollution control laws and regulations. Parkway staff would coordinate with the Mississippi Department of Environmental Quality, Office of Pollution Control, to ensure that all project activities meet the requirements of the state air quality implementation plan.

Endangered Species Act of 1973, As Amended (16 USC 1531 et seq.). Section 7 of the Endangered Species Act requires all federal agencies to consult with the U.S. Fish and Wildlife Service to ensure that an action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or critical habitat. As required by NPS *Management Policies,* the National Park Service also consulted with the Mississippi Department of Wildlife, Fisheries, and Parks to ensure that state-listed species of concern within the Natchez Trace Parkway would be protected.

Based on information furnished by the U.S. Fish and Wildlife Service and the Mississippi Department of Wildlife, Fisheries, and Parks, the National Park Service has determined that the proposed actions would have no effect on either endangered or threatened species or species of concern, or to the critical habitat of such species within the project area.

Section 404 of the Clean Water Act (33 USC 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 USC 401 et seq.). The U.S. Army Corps of Engineers issues permits for work affecting navigable waters and wetlands of the United States. Section 404 of the Clean Water Act regulates the discharge of dredged material into U.S. waters, including both navigable waters and adjacent wetlands. Section 10 of the Rivers and Harbors Act regulates activities in or affecting navigable waters.

NPS *Management Policies* require the National Park Service to examine impacts on water resources, specifically impacts on the preservation, use, and quality of water originating, flowing through, or adjacent to park boundaries. The National Park Service seeks to restore, maintain, and enhance the quality of water resources; and to prevent, control, and abate water pollution.

Under the 1987 amendments to the Clean Water Act, a new stormwater rule was issued to regulate stormwater discharges. The Storm Water Rule (40 CFR Parts 122, 123, 124) requires that a national pollution discharge elimination system (NPDES) stormwater permit be obtained for construction activities affecting more than 5 acres. The state of Mississippi, which was granted authority to administer NPDES permits by the Environmental Protection Agency, administers the stormwater permitting program.

Soils in the project area are highly erodible; when they are disturbed, they contribute to sediment loading in waterways. Before construction begins, a soil erosion and sedimentation control plan would be prepared, including detailed maps, soils surveys, descriptions of the proposed earth changes, descriptions and locations of all proposed temporary and permanent soil erosion control measures, and a proposal for the continued maintenance of all permanent soil erosion control facilities. The soil erosion and sedimentation control plan would be submitted to the Mississippi Department of Environmental Quality to satisfy the state's requirements for an NPDES permit for stormwater discharge.

Executive Order 11988, "Floodplain Management." Executive Order 11988 requires all federal agencies to avoid construction within the 100-year floodplain unless no other practical alternative exists. The 100-year floodplain of Purple Creek extends minimally into the project area; however, no construction impacts are anticipated under any alternative.

Executive Order 11990, "Protection of Wetlands." Executive Order 11990 requires all federal agencies to avoid, wherever possible, impacts on wetlands. A "Statement of Findings" has been prepared to identify mitigating actions in accordance with NPS guidelines and policy. Affected wetlands would be replaced at a minimum of 1:1 ratio (replacement to impact).

Executive Order 11987, "Exotic Organisms." Executive Order 11987 requires federal agencies to restrict the introduction of exotic species into the natural ecosystems on lands and waters that they own, lease, or hold for purposes of administration, or into any natural ecosystem of the United States. The order also encourages states, local governments, and private citizens not to introduce exotics into U.S. natural ecosystems.

CONSULTATION AND COORDINATION

The guidelines for preparing an environmental impact statement emphasize cooperative consultation and the early and continued involvement of people who may be either interested in or affected by the project. This section documents the specific elements of the public involvement program.

During scoping for the Natchez Trace Parkway project 3P13, a series of public involvement activities were conducted, including public notification of the project, individual meetings, public open house meetings, and project newsletters. The purpose of these activities was to solicit public input for the identification of transportation issues to be addressed in the project, and to define and screen potential parkway alternatives for inclusion in this *Final Supplemental Environmental Impact Statement.*

PUBLIC NOTIFICATION OF THE PROJECT

On August 3, 1998, a notice of intent to prepare a draft supplemental environmental impact statement was published in the *Federal Register.* In addition, the National Park Service sent a letter to 399 potentially interested individuals and agencies announcing the decision to prepare the document and inviting their attendance at the public scoping meeting; the list was compiled from NPS records. A press release with the same information was also issued to 149 newspapers, radio and television stations, and representatives of local governments and community organizations. On August 20, 1998, the National Park Service issued a follow-up news release with additional information and a reminder invitation to the public scoping meeting.

On August 24–26, 1998, a legal notice was published in the *Clarion Ledger* (Jackson, Mississippi) announcing the purpose, date, and location of the public scoping meeting.

On August 25, 1998, an amendment of the notice of intent to prepare the impact statement was published in the *Federal Register,* clarifying the geographic scope of the document.

PUBLIC INVOLVEMENT

Individual Group Meetings

Approximately one month before the first public open house meeting, NPS staff met individually with adjacent homeowner groups to encourage their attendance and participation at the meeting. In addition, the history of the project and the status of the most recent planning were presented. Meetings were held with the Dinsmor, Windrush, and Canterbury homeowner groups. A meeting was also held with staff at St. Andrew's School.

Public Scoping Meeting

The purpose of the first public meeting, held on August 27, 1998, was to identify public and agency issues and concerns to be addressed in the project. The meeting in Ridgeland, Mississippi, was an open house, with NPS and Federal Highway Administration (FHWA) staff available to answer questions and to assist attendees in identifying and recording their most critical transportation issues and concerns. Issues and concerns were solicited about city street access/circulation, aesthetics and parkway design, cultural resources/historic preservation, safety/multi-use trail, and community impacts. Handout materials described the planning process and the role of the public scoping meeting.

A total of 139 people attended the meeting; 332 written and oral comments were received and recorded at the meeting on large newsprint pads, comment forms, in letters and resolutions, and in statements to a stenographer. In addition, the National Park Service received additional comments through the public comment period, which closed on October 2, 1998.

Meeting attendees voiced their satisfaction and support for the NPS decision to proceed with the preparation of a supplemental environmental impact statement as a means to decide on the parkway alternative to be constructed at Old Agency Road. The following issues were identified:

Future east-west travel demand in the corridor:
  Accommodate increased demand from development planned to the west of Ridgeland.
  Facilitate access to Highland Colony Parkway and I-55.
  Preclude use of the Natchez Trace Parkway for local and commuter travel.

Local safety conditions:
  Provide adequate roadway design for projected needs and users.
  Provide separate pedestrian and bicycle facilities.

Maintain Local Accessibility:
  Minimize nonlocal traffic on local streets.
  Minimize out-of-direction travel for local access.
  Facilitate access between neighborhoods and local destinations.

History and Aesthetics of the Area:
  Maintain opportunities for scenic driving.
  Preserve the history of the Natchez Trace in the area.
  Preserve existing trees and vegetation in the area.

Community Values:
  Minimize noise impacts and privacy intrusions.
  Minimize effects to air quality.
  Preserve the "rural" atmosphere of the setting.
  Protect the quality of existing views from neighborhoods.
  Provide opportunities for accommodating needs for local parks.

Design of Natchez Trace Parkway facilities:
  Minimize the taking of existing trees and vegetation.
  Provide extensive landscape buffer planting.
  Utilize natural appearing materials.
  Locate facilities to minimize impacts and take advantage of natural features.
  Develop a multi-use trail connecting historic sites.

Facilities:
  Provide Natchez Trace facilities within reasonable costs.

Project Consistency:
  Develop project consistent with recent Natchez Trace planning decisions.

Strong differences of opinion emerged between the adjacent neighborhoods and the historic preservation special interests regarding acceptable effects of parkway construction at Old Agency Road.

Alternatives Open House Meeting

The second public open house meeting was held on November 5, 1998, with NPS and FHWA staff again available to answer questions. A total of 55 people attended. The meeting provided information on parkway design and engineering capabilities, and the public and representatives of interested agencies had an opportunity to comment on the conceptual parkway alternatives developed in response to the issues identified at the public scoping meeting. It was anticipated that additional alternatives might be developed from public comments received at the meeting.

At the meeting 16 conceptual alternatives (A–P) were presented for public review and comment. Oral and written comments were recorded during the meeting on large newsprint pads and comment forms. Several core issues were raised repeatedly during the meeting that pertained to more than one alternative. These included the following:

- Leave Old Agency Road as is.
- Construct Old Agency Road Relocated.
- Plant a vegetative buffer now.

Meeting attendees indicated their preference for several of the alternatives presented. These included:

1. Conceptual alternative A — Old Agency Road would be closed between near Whippoorwill Lane and Richardson Road. The parkway would cross the closed Old Agency Road at-grade and bridge over Old Agency Road Relocated. (This was also the original preferred alternative presented in the 1978 *Environmental Impact Statement;* it is presented as alternative 1 in this *Final Supplemental Environmental Impact Statement.*)

2. Conceptual alternative B — Old Agency Road would be closed between near Whippoorwill Lane and Richardson Road. The parkway would cross the closed Old Agency Road at-grade, but it would not cross Old Agency Road Relocated. (Presented as alternative 2 in this document.)

3. Conceptual alternative G — Old Agency Road would be closed between near Whippoorwill Lane and Highland Colony Parkway. The parkway would cross the closed Old Agency Road at-grade and bridge over an extension of Richardson Road. (Presented as alternative 3 in this document.)

4. Conceptual alternative L — Old Agency Road would remain open, and the parkway would bridge over it. (Presented to as alternative 4 in this document.)

After the meeting, the National Park Service developed a fifth alternative, based upon an analysis of additional traffic safety information. This alternative is a modification of conceptual alternative A. It was felt that this alternative would provide additional safety benefits in response to public comments at the public scoping meeting. This alternative is presented as alternative 5 in this document, and it was the proposed action in the *Draft Supplemental Environmental Impact Statement*.

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Project Newsletters

The National Park Service prepared three project newsletters to update interested individuals and agencies on the project. The newsletters were sent to each of the 399 names on the project mailing list. Copies of the newsletters may be obtained from the Natchez Trace Parkway headquarters.

The first newsletter, distributed on February 27, 1998, summarized the issues identified at the public scoping meeting and outlined the upcoming alternatives public open house.

The second newsletter, distributed on January 28, 1999, summarized the alternatives developed at the public open house and identified the roadway alternatives selected for detailed analysis in the *Draft Supplemental Environmental Impact Statement.* In addition, subsequent steps in the planning process were described.

The third newsletter was distributed on October 1, 1999. It presented the recently developed fifth alternative for the parkway and Old Agency Road, and it provided a matrix of its actions compared to the previous four alternatives.

PUBLIC REVIEW OF THE *DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT*

An environmental impact statement was prepared to evaluate the impacts of the five alternatives identified by the public and the National Park Service in late 1998 and early 1999. Work on the impact analysis started in 1999 and ended in early 2000. The availability of the *Draft Supplemental Environmental Impact Statement* was announced in the *Federal Register* on May 12, 2000. The 60-day public review and comment period officially closed on July 13, 2000. Comments that addressed the alternatives and analysis in the draft document were accepted by letter, e-mail, and fax at the superintendent's office in Tupelo, Mississippi.

Public Meeting

On June 15, 2000, a public meeting was held in Ridgeland, Mississippi. For the first two hours there was an open house, followed by a public forum the final hour. A letter was sent notifying individuals on the mailing list about the meeting, and notices were printed in selected local newspapers in Madison and Hinds Counties. Approximately 111 individuals attended the meeting.

During the open house portion of the meeting attendees could view large graphics of each of the five alternatives and ask questions of NPS and FHWA personnel. Forms were available for meeting attendees to provide written comments. A court reporter was also available to record oral comments.

The public forum allowed individuals to publicly state their issues and concerns. Individuals who had signed up before the forum to speak were given approximately 5 minutes to present comments. At the end of the forum, anyone who had arrived late or who had failed to register was also given an opportunity to speak. The court reporter recorded all comments and provided a copy of the transcript to the National Park Service.

A summary of the content of the comments from the public meeting and from the public review period is provided in the "Responses to Comments" section below.

Additional Consultation

In response to comments several additional meetings were held following the public review period. At the request of Ridgeland city officials, Natchez Trace Parkway staff met with the mayor and other city representatives on August 7, 2000. The purpose of the meeting was to allow city officials to explain the modified alternative 4 that the city had submitted during the comment period. The meeting was for informational purposes only and did not involve any decision-making or discussion of the alternatives by the National Park Service.

Consultation with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana was initiated by the Natchez Trace Parkway because of the potential impacts of the alternatives on the Choctaw Agency site. A meeting was held on October 19, 2000, in Jackson, Mississippi, and in Ridgeland at the project site with representatives of the Mississippi Band of the Choctaw and the Choctaw Nation of Oklahoma. Concerns about construction near the Choctaw Agency site were discussed, and a course of action was determined. A memorandum of understanding or general agreement between the National Park Service and the various Choctaw bands will be drafted that outlines how the site will be protected and interpreted, and what measures will occur in the event of inadvertent discoveries such as human remains. This memorandum of understanding will be provided to the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw in Louisiana for their comment and approval. Future consultation will also occur with the Chickasaw.

LIST OF AGENCIES AND ORGANIZATIONS TO WHOM COPIES OF THIS DOCUMENT WERE SENT

An asterisk denotes those agencies or organizations who commented on the *Draft Supplemental Environmental Impact Statement.*

Congressional Representatives

Senator Thad Cochran — Jackson, MS
Senator Trent Lott — Jackson, MS
Congressman Ronnie Shows — Jackson, MS
Congressman Tim Ford — Jackson, MS
Congressman Chip Pickering — Pearl, MS
Congressman Bennie Thompson — Bolton, MS
Congressman Roger Wicker — Tupelo, MS

Federal Agencies and Organizations

Advisory Council on Historic Preservation — Washington, DC
Department of Agriculture
Natural Resources Conservation Service — Jackson, MS; Monroe, LA; Port Gibson, MS
Department of Defense
    U.S. Army Corps of Engineers — Vicksburg District Office, Vicksburg, MS
Department of the Interior
    Bureau of Indian Affairs — Washington, DC
    National Park Service
        Natchez National Historical Park — Natchez, MS
        Vicksburg National Military Park — Vicksburg, MS

U.S. Fish and Wildlife Service — Atlanta, GA; Jackson, MS; Vicksburg, MS
U.S. Geological Survey — Reston, VA
Department of Transportation
Federal Highway Administration — Sterling, VA; Ridgeland, MS; Jackson, MS
Environmental Protection Agency — Region IV, Atlanta, GA*

Native American Tribal Nations
Choctaw Nation of Oklahoma
Jena Band of the Choctaw in Louisiana
Mississippi Band of the Choctaw
Chickasaw Nation of Oklahoma

State Agencies and Organizations
Alabama, Office of the Governor*
Central Mississippi Planning and Development
Mississippi Department of Archives and History*
Mississippi Department of Economic and Community Development
Mississippi Department of Transportation
Mississippi Department of Wildlife, Fisheries, and Parks
Mississippi Office of Pollution Control
Mississippi Soil and Water Conservation
Mississippi Visitor Welcome Center
Mississippi Department of Environmental Quality — Jackson, MS
Craftsmen's Guild of Mississippi — Jackson, MS
Pearl River Valley Water Management District — Ridgeland, MS
Mississippi Crafts Center
Mississippi State Society for the Daughters of the American Revolution — Madison, MS

City, County, and Local Governments
Mayor of Madison, MS
Mayor of Clinton, MS
Mayor of Ridgeland, MS*
Mayor of Jackson, MS
Madison County Administrator, Madison, MS
Hinds County Administrator, Hinds, MS
Madison County Board of Supervisors, Madison, MS
Hinds County Board of Supervisors, Hinds, MS
SCORP Project Director, Jackson, MS
Hinds County Road Management, Raymond, MS

Organizations
Canterbury Homeowner's Association*
Friends of Old Agency Road*
Jackson Association of Realtors®, Inc.*
The Nature Conservancy, Jackson, MS
Natchez Trace Trail Conference, Inc., Jackson, MS
Natchez Trace Parkway Association, Belmont, MS
Old Agency Road Historic Preservation Society, Inc.*

Libraries
Jackson/Hinds Library System, Eudora Welty Library, Jackson, MS
Ridgeland Public Library, Ridgeland, MS

Academic Institutions
St. Andrew's Episcopal School, Ridgeland, MS
Jackson State University, Jackson, MS

Media — Newspapers, TV and Radio Stations
Clarion Ledger, Jackson, MS
Northside Sun, Jackson, MS
Madison County Journal, Madison, MS
Madison County Herald, Madison, MS
Northeast MS Daily Journal, Tupelo, MS
Clinton News, Clinton, MS
WJTV, Jackson, MS
WLBT-TV, Jackson, MS

RESPONSES TO COMMENTS

Comment Summary

Approximately 240 written comments were received during the public review period, including 1 petition with a total of 637 signatures, 44 comment sheets from attendees at a public meeting, 25 signed form letters, and 19 letters from individuals, agencies, and organizations. Approximately 35 individuals had their oral comments recorded by a court reporter, either privately before the formal meeting or as presentations during the formal meeting. Some individuals, city offices, and private organizations submitted multiple responses in written and/or oral form.

The majority of the comments addressed the proposed action, alternative 5, and made comments on other alternatives and their impacts, particularly alternative 4.

The major issue generating opposition to alternative 5 was the closing of a portion of Old Agency Road for vehicular travel. For example, those individuals signing the petition favored a plan for completing the Natchez Trace Parkway, but opposed closing any portion of Old Agency Road because of its natural beauty and importance in the local transportation network. Other local agency and organization letters stated similar positions regarding Old Agency Road and emphasized the road's historical significance. Alternative 4 was the only alternative in the *Draft Supplemental Environmental Impact Statement* that kept Old Agency Road open through the project area; therefore, many commenters favored alternative 4 or a modified version.

Individuals who supported alternative 5, particularly residents of the Windrush and Canterbury subdivisions, favored the location and depressed profile of the bridge that would cross the parkway motor road because it would be less visually intrusive than structures in other alternatives. Many of these individuals opposed alternative 4. For example, the form letters from Windrush residents specifically opposed alternative 4 because of the height and length of the bridge and its location directly across from their community.

Multiple issues or concerns were addressed in many letters. Issues identified by the city of Ridgeland and the U.S. Environmental Protection Agency focused on potential impacts to the local transportation networks, land use, visual characteristics, wetlands, cultural resources, environmental justice, and noise. Individuals and organizations identified concerns related to the effects of alternative 4 and 5 on the historical character of Old Agency Road, local travel patterns and travel times, local visual quality, road safety, emergency service response times, traffic noise, and property values.

Content Analysis

At the close of the comment period the National Park Service began a content analysis of each written and oral response to the *Draft Supplemental Environmental Impact Statement*. Every letter, form, or oral comment was read in its entirety, and specific comments within each letter or form were identified and bracketed. These comments were entered into a matrix that listed the commenter (individual, agency, or organization), summarized the comments, and identified the comment as substantive or nonsubstantive according to the criteria set forth in the Council on Environmental Quality regulations. NPS guidelines for implementing the National Environmental Policy Act *(Director's Order 12)* identify substantive comments as those that question the accuracy of information in the environmental impact statement; question the adequacy of the environmental analysis; present reasonable alternatives other than those presented in the statement; or cause changes or revisions in the proposed action. Nonsubstantive comments are those that offer an opinion, express an emotion such as fear or delight, or provide information not directly related to the issues or impact analyses in the environmental impact statement.

The purpose of reading and analyzing the contents of the comment letters, forms, and oral testimony was to assist the National Park Service in determining if the substantive issues identified by the public and agencies warranted modification or the study of additional alternatives, issues, and impacts. Substantive issues can elicit a number of responses, including a modification of existing alternatives, the development and analysis of new alternatives, modifying or improving the environmental analysis, making factual corrections, or explaining why comments do not warrant further agency response.

Using the information provided by the public during the review process, the National Park Service re-evaluated the draft proposed action (alternative 5) and developed a revised proposed action as described in this final document. Additional analysis and factual corrections were also made throughout the final document in response to public comments.

Organization of Comments and Responses

Substantive comments received on the *Draft Supplemental Environmental Impact Statement* are summarized below, along with the National Park Service's responses to those comments. A total of 34 substantive comments are addressed, either as statements that were derived word-for-word from a commenter's letter or testimony, or as statements that were paraphrased from multiple letters or testimonies raising the same issue or concern. The agency, organization, or individual that made the comment is identified following the comment. Where a number of similar comments were made by a group of people, one or two individual's names were listed to represent the group.

The comments and responses are organized by topic. The topics, which are similar to or the same as section headings or chapters in the *Draft Supplemental Environmental Impact Statement*, are organized in the following order:

Purpose of and Need for Action
Alternatives
Consultation and Coordination
Natural Resources
Cultural Resources
Environmental Justice
Noise
Transportation/Traffic
Land Use and Transportation Plans
Visual Resources

Copies of letters from agencies and organizations are included in this document. Many of the substantive comments were derived from these letters. Form letters, petitions, and letters from private individuals are available for review at the Office of the Superintendent, Natchez Trace Parkway, Tupelo, Mississippi.

Comments and Responses

Purpose of and Need for Action

1. Comment: Further detail is needed regarding the purpose and need for this project. While the document states that the proposed construction will help fulfill an NPS plan that has been underway for 60 years and fulfill a legislative mandate, the document also states that there is a current transportation need for the proposed parkway segment. The document states that this parkway segment would facilitate regional travel for area motorists, but does not include a detailed map showing existing roadways and travel routes already present in the region to demonstrate exactly how the proposed parkway segment would help motorists. The document specifically states that this parkway segment would eliminate the need for a detour through the greater metropolitan area of Jackson, Mississippi, but does not identify on a map where this current detour route is located compared to the proposed Natchez Trace Parkway project 3P13 alternatives.

   Commenter: U.S. Environmental Protection Agency

   Response: The National Park Service believes that the "Purpose of and Need for Action" chapter adequately states and defines the purpose of and need for this section of the Natchez Trace Parkway. The Vicinity map has been revised to provide more detail in regard to existing roadways, and the text has been modified to clarify local transportation routes. In addition, another map has been included that illustrates the current detour route for motorists traveling along the parkway motor road through the city of Ridgeland and the Jackson metropolitan area. The detour routes motorists around the uncompleted section of the parkway (section 3P), which includes project 3P13, by way of I-220 from I-20 west of Jackson to I-55 north of Jackson. This detour requires approximately 7.2 kilometers (4.5 miles) of out-of-direction travel for parkway motorists.

Alternatives

2. Comment: All the alternatives (including the no-action alternative, which is the 1978 parkway section design) include long-term adverse impacts to wetlands. Please explain why an alternative that avoids impacts to wetlands was not presented.

   Commenter: U.S. Environmental Protection Agency

Response: As identified in the "Purpose of and Need for Action" chapter, the completion of the parkway motor road has been underway for more than 30 years. Land acquisition for section 3P, which includes project 3P13 (the project discussed in the draft document), was completed in 1967 when the lands acquired by the state of Mississippi for parkway purposes were transferred to the federal government. The construction of the 3P13 section of the parkway is restricted to the land that was transferred at that time. The location of other roads has been determined according to deed reserves and ongoing consultations with county, city, and state road officials to maintain existing traffic flow. The 3P13 right-of-way is a long and narrow strip of land, and adjacent sections of the parkway on either end have already been completed; therefore, designing an alternative that would avoid all wetlands and that would still conform with parkway design standards was not feasible. However, as noted in response 11 and as outlined in the "Statement of Findings" for wetlands (appendix E), impacts to wetlands would be minimized where possible.

3. Comment: The bridge shown in the alternative 4 graphic on page 18 of the *Draft Supplemental Environmental Impact Statement* indicates an exaggeratedly long Natchez Trace Parkway bridge crossing Old Agency Road. The bridge appears unnecessarily and considerably longer than the other bridge alternatives. The drawing also indicates that the bridge would span the proposed closed entrance to Dinsmor.

   Commenter (representative): Mayor Gene McGee, City of Ridgeland

   Response: At road crossings highway engineers typically design bridges to cross perpendicularly. The bridge can then be as short and as efficient in the use of construction materials and construction dollars as possible. In addition, the shorter the bridge, the thinner the bridge deck. Bridges with short spans can support themselves without the need of beams or girders.

   In alternative 4 existing Old Agency Road (in the western portion of the study area) would cross from the south to the north parkway boundary lines on a long flat angle. Because of this flat angled crossing, the parkway motor road must cross Old Agency Road on an extremely flat, approximately 30 degree skew. Approach fills at bridge abutments must be constructed on 3:1 side slopes for stability. These approach fills must be far enough back from Old Agency Road so that the fills would not encroach on that roadway. Retaining walls might be used to mitigate impacts of the approach fills on Old Agency Road; however, retaining walls can be expensive to construct and maintain, would visually impact Old Agency Road, and would result in construction impacts to Old Agency Road and the tree canopy.

   In alternative 1 where a parkway bridge would cross Old Agency Road Relocated the skew angle would be substantially reduced, and in alternative 3 where a parkway bridge would cross over a Richardson Road extension the angle is perpendicular. In both of these cases the superstructure of the bridges would likely be that of the thickness of the deck slab only 2 to 3 feet total. In alternative 4 the deck of the longer bridge must be supported by additional structural elements, probably a box girder in this case. The result would be a structure that would be about 3 feet higher, the thickness of the required box girder.

   In summary, because of the flat skew angle, the bridge proposed under alternative 4 must have a longer center span to minimize construction impacts on Old Agency Road, and to preserve as much canopy tree cover as possible.

4. Comment: Modify alternative 4 by shifting the parkway alignment approximately 200 feet south of the proposed location to increase the separation from Windrush and to cross Old Agency Road in a cut section. This change would allow the elevation of the bridge to be lower and closer to natural grade and would leave Old Agency Road open, would provide additional access and capacity with the construction of Old Agency Road Relocated, and would complete the parkway. Noise levels and visual impacts would be greatly reduced.

   Commenter (representative): Mayor Gene McGee, City of Ridgeland

   Response: The city of Ridgeland has submitted a proposal to modify alternative 4 for analysis in this *Final Supplemental Environmental Impact Statement.* This alternative will be referred to as the modified alternative 4 in the following paragraphs.

   The modified alternative 4 would generally change the preferred parkway motor road alignment (as proposed in all five alternatives) to run near the center of the parkway property and to parallel Old Agency Road Relocated. Old Agency Road would be lowered in vertical grade for approximately 1,000 feet, allowing it to pass under a proposed parkway bridge. Old Agency Road would also be realigned to intersect with Old Agency Road Relocated, requiring approximately 600 feet of Old Agency Road to be closed. This modified alternative would shift the proposed motor road alignment closer to the proposed Old Agency Road Relocated, reducing the vegetative separation of the two roads and thus increasing the likelihood that surrounding residential structures could be seen from the parkway motor road. (The National Park Service's revised proposed action would provide for sufficient separation to maintain vegetative screening between the parkway motor road and adjacent development.) In addition, lowering Old Agency Road in this location could potentially have an adverse impact on storm drainage in the project area; sufficient information was not provided to adequately analyze this impact.

   The construction of the parkway motor road would impact Old Agency Road regardless of the alternative selected because the National Park Service must construct the parkway within the land that was purchased by the state of Mississippi and transferred to the National Park Service in 1967. The construction limits for a modified alternative 4 would be outside the NPS boundary, requiring the acquisition of additional land near the Dinsmor subdivision. The National Park Service's revised proposed action would not require additional land acquisition.

   Constructing the proposed parkway section within the existing boundaries would require that the motor road go over or under Old Agency Road, or cross it at grade. Changing the parkway alignment through Ridgeland, as the modified alternative 4 proposes, would be technically possible, but not fiscally prudent, because substantial parkway motor road and bridge construction has been completed or is under way on both sides of the Old Agency Road section. Changing the alignment at this time would potentially increase the construction cost for this section because the existing motor road southwest of project 3P13 would have to be altered to maintain an aesthetically pleasing road alignment. The Natchez Trace Parkway in its entirety is eligible for the National Register of Historic Places as a designed cultural landscape, a tribute to landscape architectural design and roadway engineering partnerships at their best. Over the course of the construction history of the Natchez Trace Parkway, FHWA design engineers and NPS landscape architects have developed a design partnership to provide parkway travelers with a safe and aesthetically pleasing driving experience. Compromising the parkway design standards at this late date in the 60-year history of the parkway would not be advisable. The aesthetic alignment of the parkway motor road would be maintained under all the alternatives in the *Final Supplemental Environmental Impact Statement*, including the revised proposed action.

There are few feasible alternatives for leaving the entire section of Old Agency Road open. A parkway bridge over Old Agency Road would significantly impact the present tree-canopied appearance of Old Agency Road. Also, the location for a parkway bridge over Old Agency Road is limited because of the need for this segment to tie into parkway segments immediately to the east and west, which are already under construction. Consequently, to maintain the aesthetic alignment of the parkway motor road, any potential bridge crossing of Old Agency Road would require construction toward the northern part of the parkway boundary, closer to the Windrush subdivision.

The modified alternative 4 bridge structure would be reduced in vertical elevation by lowering approximately 1,000 linear feet of Old Agency Road; this action would totally destroy the tree-canopied appearance and historical integrity of this portion of the nationally significant Old Natchez Trace. Also, approximately 600 feet of Old Agency Road would be closed, similar to the National Park Service's revised proposed action. The tree-lined tunnel appearance would be visually impacted by a parkway bridge crossing over Old Agency Road because constructing a bridge and approach fills would require the removal of adjacent trees. Of all the alternatives proposed and analyzed, the modified alternative 4 proposal, which would lower the grade of the existing Old Agency Road (Old Natchez Trace), would adversely impact the Trace the most.

Even though the modified alternative 4 could reduce the impact on area residents by lowering the vertical height of the proposed bridge, the total destruction of 1,000 feet of Old Agency Road (Old Natchez Trace) by lowering it by 10 to 14 feet in grade just to accommodate the bridge crossing would not be prudent. The historical integrity of this section of the nationally significant Old Natchez Trace would be irrevocably destroyed. Noise levels would not be noticeably altered because traffic on Old Agency Road, Old Agency Road Relocated, and the parkway motor road would continue to create traffic noise on either side of the depressed Old Agency Road, which would carry throughout the narrow project area.

5. Comment: Locate Old Agency Road Relocated in alternative 4 along the southern edge of the project area boundary between the road to Greenwood Plantation and Highland Colony Parkway to allow for the development of the Seaton property east of Greenwood Plantation. Extend the access road from Old Agency Road Relocated to Brame Road all the way to Highland Colony Parkway in alternative 5. This would help minimize the bottleneck that would occur on Old Agency Road east of Richardson Road and where Old Agency Road Relocated merges into Old Agency Road.

   Commenter: Bill Brame

   Response: This proposal generally suggests that an Old Agency Road Relocated extension be constructed out to Highland Colony Parkway, with the road running along the southern parkway boundary so that the Seaton property could be developed and traffic could be taken off of Old Agency Road Relocated. The National Park Service's revised proposed action would extend Old Agency Road Relocated to Highland Colony Parkway. The relocated road would be constructed to maintain a vegetative buffer from the adjacent property and would be a limited-access road with a driveway to the Greenwood Plantation and access to Brame Road, all being deed-reserved accesses. Providing access to the Seaton property was not reserved in the deed when the land was transferred to the National Park Service from the state of Mississippi.

6. Comment: Natchez Trace Parkway should cross Old Agency Road at grade with stop signs at the intersection of the two roads. The at-grade crossing should be just west of the entrance to the Dinsmor subdivision because it appears most of the vehicles on Old Agency Road generate from Dinsmor and the subdivisions off of Richardson Road. If this is the case, most of these residents head east away from the proposed crossing when they enter Old Agency Road. On their return they exit Old Agency Road before the crossing the parkway. Therefore, most of this traffic would never be in the area of the crossing.

   Commenter: Susan Goldberg

   Response: This suggestion was previously analyzed as option E, one of the 16 conceptual alternatives considered during the initial planning for project 3P13 of the parkway. As explained in the "Alternatives, Including the Proposed Action" chapter, under the section "Alternative Concepts Considered but Not Analyzed in Detail," this option was eliminated from further consideration for a number of reasons. The at-grade intersection would not meet parkway design standards to limit distances between entrances and exits to the parkway, and it would result in inherent public safety hazards that exist with at-grade intersections, as experienced on other sections of the parkway. A similar intersection exists at Tupelo (the Palmetto road crossing), where records show that from 1963 to 1998 there were a total of 147 accidents, 120 of which resulted in injuries and 7 in deaths. A grade-separated crossing is now being constructed at the Palmetto road crossing to eliminate this hazardous situation. One of the primary management and design objectives for the Natchez Trace Parkway is to enhance the visitor experience on the parkway by providing a system of limited, controlled access points through the elimination of at-grade road crossings. Option E was not consistent with these objectives in that it did not allow for safe traffic conditions and could cause increased congestion on the Natchez Trace Parkway because access to the parkway would be provided at the intersection of the two roads. Adverse impacts on the historical visual character of the parkway from traffic at the intersection were also of concern.

Consultation and Coordination

7. Comment: There is no information in the *Draft Supplemental Environmental Impact Statement* regarding whether the National Park Service has consulted with the Choctaw Nation and other concerned Native American tribes regarding cultural and archeological issues. Please clarify and give information in the final document regarding proposed measures to mitigate impacts to the Choctaw Agency site.

   Commenter: U.S. Environmental Protection Agency

   Response: The National Park Service is currently consulting with the Choctaw Nation in Mississippi, Louisiana, and Oklahoma to ensure that their concerns and interests in the project area are addressed.

   The Old Natchez Trace would be restored to its appearance during the primary period of significance, as specified in the 1995 listing for the National Register of Historic Places. Further mitigation would involve the interpretation of the Old Trace and its association with the Choctaw Agency site. The restoration of the Old Natchez Trace would allow visitors to experience the character of the Old Trace as it existed in the late 18th and early 19th centuries. The Choctaw Agency site, which would be avoided during construction, would be subsequently interpreted for Natchez Trace Parkway visitors.

Because of the sensitive nature of the area and its significance to the Choctaw Nation and others that regard the area as ancestral territory, a memorandum of understanding is being developed in consultation with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of Choctaw in Louisiana to deal with inadvertent archeological discoveries and other concerns. The Chickasaw Nation of Oklahoma was also consulted.

Suggested measures in the memorandum of understanding and noted in the "Mitigations for Special Resource Concerns" include providing an archeologist onsite at all new construction areas to monitor activities. In consultation with the Choctaw Nation, inadvertent discoveries would be handled by immediately notifying tribal historic preservation officers and Natchez Trace Parkway cultural resource staff. Any adverse effects to potential sites would be mitigated through consultation with tribal groups and would be resolved through avoidance and/or site documentation.

The National Park Service would ensure that adequate site security measures were implemented before interpretive site development and public programs were initiated. These measures could include park patrols, surveillance, fencing, and educational outreach programs. Providing direct access from the parkway motor road would allow the area to be more easily monitored. The access road would be designed to provide the least possible disturbance to the cultural setting of the area.

Interpretive program design and development for the Choctaw Agency site would be accomplished through consultation with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of the Choctaw of Louisiana. These groups would also be consulted in developing new Natchez Trace Parkway interpretive materials that were accurate and inclusive of Native Americans' viewpoints.

Natural Resources

8. Comment: The final document should discuss biodiversity aspects of the proposed action. For example, will the project increase, restore, or decrease biodiversity of the area or region?

   Commenter: U.S. Environmental Protection Agency

   Response: While the area considered in the *Draft Supplemental Environmental Impact Statement* contains habitat for a variety of wildlife species and vegetation, it is a narrow corridor only 1.1-miles long that is surrounded by residential and road development to the north, south, and east. The area lies within the rapidly growing city of Ridgeland. Because of the history of development and forest fragmentation, no old-growth habitat exists within the majority of the area; most of the area is considered edge habitat from an ecological viewpoint. Regardless of the alternative implemented, the project area will remain as edge habitat, albeit with a greater percentage of open areas to accommodate the motor road and mowed areas adjacent to the road. Thus, a neutral effect on biodiversity is expected.

   As identified under the "Wildlife" section in the "Affected Environment" chapter, wildlife species found in the right-of-way are considered common in the area, county, and region. No threatened or endangered species or species of special concern are known to occur in the area. With respect to neotropical migrant songbirds, none of the documented species in the area is classified by the Partners in Flight organization as a high conservation priority. While some potential habitat for state-listed species may occur, construction of the parkway and other roads is not likely to cause any decline to these species. Because the right-of-way does not contribute significantly to local or regional biological diversity, it was not evaluated in greater detail in the environmental impact statement.

9. Comment: The proposed action in the *Draft Supplemental Environmental Impact Statement* (alternative 5) describes permanent filling of 1.4 wetland acres, a reduction of wetland areas by 25%, and a total of 22.5 acres of vegetation being impacted. The *Draft Supplemental Environmental Impact Statement* calls this "irretrievable commitments of resources," but it does not give detailed information regarding impact mitigation for these losses. A draft mitigation plan to compensate for predicted wetland losses should be developed during the NEPA process. Every effort should be made to avoid destroying wetlands, especially those of higher quality, and preserve drainage ways that provide habitat and travel corridors for wildlife.

   Commenter: U.S. Environmental Protection Agency

   Response: As required by NPS *Director's Order 77-1: Wetland Protection,* a "Statement of Findings" for wetlands has been completed and is included with this final document as appendix E. The "Statement of Findings" identifies the following information:

   - the wetland impacts that would result from implementing the revised proposed action, including a detailed description of the affected wetlands
   - why an alternative with no wetland or fewer wetland impacts could not be selected
   - what steps are to be taken to minimize wetland impacts in the alternative design and during construction
   - a description of the compensation that is proposed to mitigate the loss of wetlands

   Because there is insufficient opportunity to mitigate impacts attributed to this project either in the same watershed or in another watershed within the parkway boundaries, a mitigation plan would be drafted for another park unit in the southeast region, Jean Lafitte National Historical Park and Preserve in Louisiana. This park includes the Barataria Preserve unit, an 18,500-acre wetland complex composed of bottomland hardwood, cypress swamp, and freshwater/intermediate marshes. Within the preserve numerous wetland restoration projects have been identified. Additional information on the wetland mitigation plan is presented in the "Statement of Findings" in appendix E. A specific mitigation plan would be developed during design development for this section of the parkway.

10. Comment: The final supplemental environmental impact statement should discuss how wetlands were delineated.

    Commenter: U.S. Environmental Protection Agency

    Response: The "Statement of Findings" for wetlands in appendix E, prepared in compliance with Executive Order 11990 and NPS *Director's Order 77-1,* outlines the wetland delineation process in the section entitled "Wetlands within the Project Area."

11. Comment: The proposed project should include detailed plans to offset unavoidable wetland losses to the extent possible. Compensation sites should be located and described, and details

regarding enhancement or creation techniques should be included. The site layout should be designed to avoid or minimize direct and indirect impacts to wetland water quantity and quality.

Commenter: U.S. Environmental Protection Agency

Response: During the design development phase of the proposed roadway, the Federal Highway Administration would continue to work with the National Park Service to minimize impacts to wetlands within the constraints of highway safety, good design, and preservation of aesthetic/ scenic qualities indicative of the Natchez Trace Parkway. Best management practices would also be employed to minimize impacts to wetlands. Examples of these practices and other measures are listed in the "Wetland Avoidance and Minimization" section of the "Statement of Findings" for wetlands in appendix E.

12. Comment: Clarify the discussion on pages 26–27 in the *Draft Supplemental Environmental Impact Statement* regarding stream corridors and wetlands, which describes wetland mitigation measures during the construction phase of the project. The document states that the mitigation measures during construction would "reasonably protect streams, wetlands, and associated aquatic life from the potential effects of soil erosion and sedimentation during both the construction and operation" of the parkway segment. This conflicts with the information given in the discussions under "Unavoidable Adverse Effects" and "Irretrievable Commitments of Resources" for each of the five alternatives, which describes wetlands being permanently filled to construct new roads, reduction in wetland size, and remaining wetland segment becoming fragmented.

Commenter: U.S. Environmental Protection Agency

Response: Although there would be potentially irretrievable impacts on approximately 1.71 acres of wetlands in the revised proposed action as the result of road fills or cuts, the language provided in the mitigation sections on pages 26 and 27 in the *Draft Supplemental Environmental Impact Statement* remains true. Approximately 10.5 acres of wetlands exist within the project area, 10% of which would be permanently impacted by road construction. Wetlands directly adjacent to construction areas and throughout the project, as well as all streams and aquatic life, would be reasonably protected from the effects of soil erosion and sedimentation during both the construction and operation of the parkway segment. For example, the hydrology of wetland areas outside the limits of construction would be protected by the installation of culverts or other devices to ensure that existing water flows were maintained and that additional losses of wetlands did not occur because of fragmentation or a loss of wetland size.

13. Comment: If the T intersection with Old Agency to Old Agency Relocated is reversed in alternative 4, then approximately 0.1 mile of Old Agency Road could be restored, thus producing 0.5 acre of revegetation and decreasing the net loss of vegetation from 26.6 to 26.1 acres (page 109 of the *Draft Supplemental Environmental Impact Statement*).

Commenter: Wagonner Engineering (in letter submitted to the city of Ridgeland)

Response: Comment noted. During the road design phase vegetation impacts could slightly increase or decrease as the roadway and intersections were designed to meet American Association of State Highway and Transportation Officials (AASHTO) standards for sight distance, safety, and alignment.

Cultural Resources

14. Comment: The final supplemental environmental impact statement should give details regarding progress made toward resolution of the section 106 issues concerning the project's impacts and proposed mitigation measures for those impacts.

    Commenter: U.S. Environmental Protection Agency

    Response: Letters documenting section 106 compliance for this project are included in "Appendix C: Cultural Resource Consultation." Chronology of consultation is as follows:

    1967 — Land acquisition for section 3P was completed, and the parkway alignment was established.

    December 1978 — The Mississippi Department of Archives and History, which functions as the State Historic Preservation Office (SHPO) for Mississippi, reviewed and commented on the *Draft Environmental Impact Statement* for additional construction on the Natchez Trace Parkway. At that time they concurred that adverse effects to cultural properties would be mitigated by means of facility design, control of visitor use, and interpretation of cultural resources.

    July 1980 — The Advisory Council on Historic Preservation signed off on a memorandum of agreement that dealt with the construction of several sections of the Natchez Trace Parkway (per the 1978 *Draft Environmental Impact Statement*), including section 3P in Mississippi. At that time adverse effects to properties eligible for the National Register of Historic Places were assessed, and certain site stipulations were devised. With regard to adverse effects to segments of the Old Natchez Trace eligible for listing on the national register, the stipulation was that prior to commencing any parkway construction

    > NPS will submit the plans for that section of the Parkway to the appropriate SHPO for review and comments. If, after review of the plans, the SHPO is of the opinion that the construction will adversely affect the Old Natchez Trace, NPS will request the comments of the Council in accordance with Section 800.4(d) of the Council's regulations.

    1988–1994 — Consultation was conducted through meetings on and off site with the Mississippi Department of Archives and History, the public, and the Advisory Council on Historic Preservation. The Mississippi Department of Archives and History and the National Park Service worked through various versions of a national register nomination for the Old Agency Road (Old Natchez Trace) segment and continued to disagree on the primary period of significance. A number of public meetings took place during this time period.

    December 1993 — Staff of the Advisory Council on Historic Preservation were fully briefed on the current situation, as well as the extensive public involvement that had been ongoing with the proposed undertaking (parkway construction at Old Agency Road), at a meeting in Jackson, Mississippi, with staff from the Mississippi Department of Archives and History and the National Park Service.

    April 1994 — After more than six years of continuing consultation and debate, the Mississippi state historic preservation officer declared that "in light of the differences of opinion" expressed over time, his office could not sign the proposed 1994 memorandum of agreement and therefore removed themselves as a consulting party in the section 106 review process.

June 1994 — The National Park Service contacted the Advisory Council on Historic Preservation and informed them of the withdrawal of the Mississippi state historic preservation officer from consultation. At that time the Natchez Trace Parkway requested the initiation of section 106 consultation with the advisory council, as provided for in 36 CFR 800.1(c)(1)(ii). No record of a response from the advisory council can be found in Natchez Trace Parkway records.

December 1994 — The National Park Service submitted a nomination to list the segment of Old Natchez Trace and the Choctaw Agency site in Madison County, Mississippi, on the National Register of Historic Places.

February 1995 — The national register nomination for Old Natchez Trace and the Choctaw Agency site was accepted and the sites were listed. The comments from the abstract state that the primary significance of these sites is their "association with the historic Natchez Trace, an important late 18th – early 19th century footpath and road connecting Natchez on the Mississippi River with Nashville on the Cumberland River. The Choctaw Agency represented the U.S. Government in their dealings with the Choctaw Nation from 1811 to 1823. The site can provide important information on early contact between Euro-Americans and the Choctaw Indians."

1995–1998 — Construction of the northern terminus of the parkway took precedent over the southern terminus and the sections to be built in the Jackson/Ridgeland area of Mississippi. In 1998 the Natchez Trace Parkway staff began the process of writing a new draft supplemental environmental impact statement to address a resolution of the construction of the 3P section of the parkway near Ridgeland, Mississippi.

May 2000 — The *Draft Supplemental Environmental Impact Statement* was issued to address the 1.8 kilometer (1.1 mile) section of 3P13, known as the Old Agency Road section. The document was the result of continuing concern in the local community regarding parkway construction as set forth in the 1978 *Natchez Trace Parkway / Final Environmental Impact Statement*. The *Draft Supplemental Environmental Impact Statement* was written after a series of public meetings in 1998 that developed 16 conceptual design alternatives to the 1978 proposed action. The five most feasible alternatives were addressed. The 60-day comment period on this supplemental document concluded July 13, 2000.

May 2000 — The National Park Service once again requested the involvement and comments of the Mississippi Department of Archives and History with regard to this section of the Natchez Trace Parkway. In a letter dated June 14, 2000, the state historic preservation officer reiterated that they were still withdrawn from the section 106 consultation process for this undertaking.

June 2000 — The National Park Service contacted the Advisory Council on Historic Preservation to request the conclusion of consultation that had been initiated in 1994. The advisory council requested an update of materials on the project, which was sent as requested.

August 2000 — Consultation regarding this undertaking was initiated with the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of Choctaw in Louisiana

October 19, 2000 — A meeting was held in Jackson, Mississippi, and in Ridgeland at the project site with representatives of the Mississippi Band of the Choctaw, the Choctaw Nation of Oklahoma, and the Jena Band of Choctaw in Louisiana. Concerns about construction near the Choctaw Agency site were discussed, and a course of action was determined. An archeologist would be on site during construction to provide monitoring. In addition, a memorandum of understanding or general agreement between the National Park Service and the various Choctaw bands is to be drafted that outlines how the site would be protected and interpreted, and what measures would occur in the event of inadvertent discoveries such as human remains. This memorandum of understanding is to be provided to the Jena Band, the Mississippi Band, and the Choctaw Nation for their comment and approval. Future consultation will also occur with the Chickasaw.

15. Comment: All five alternatives include the loss of the historic access to Greenwood Plantation, a site that is eligible for the National Register of Historic Places. Please give further information regarding mitigation measures in the final supplemental environmental impact statement.

    Commenter: U.S. Environmental Protection Agency

    Response: Every effort would be made to visually screen the Greenwood Plantation from the parkway and its construction. The National Park Service would provide photo-documentation of the location of the traditional driveway to the plantation. Under the revised proposed action the National Park Service would work with the landowner to restore that section of the closed driveway to the plantation's period of historical significance.

16. Comment: According to the *Draft Supplemental Environmental Impact Statement*, alternatives 4 and 5 include long-term and major adverse impacts to the visual character of the area. This impacted area includes a portion of Old Agency Road (Old Natchez Trace) and the Choctaw Agency site, both of which are listed on the National Register of Historic Places. Specific impacts and mitigation for these sites and the additional archeological sites mentioned on page 42 should be discussed in the final supplemental environmental impact statement. Also, clarify what is meant by the statement that "it is possible that the access road would disturb the cultural setting of the area," which is included in the discussion of impacts on archeological resources for each alternative.

    Commenter: U.S. Environmental Protection Agency

    Response: The Old Natchez Trace would be restored to its appearance during the primary period of significance, as specified in the 1995 listing for the National Register of Historic Places. Further mitigation would involve interpretation of the Old Trace and its association with the Choctaw Agency site. Restoring this segment of the Old Trace to its appearance during the historical period of significance would allow visitors (from the local community and points beyond) to experience the character of the Old Trace as it existed in the late 18th and early 19th centuries. The Choctaw Agency site would be avoided during construction, and it would be subsequently interpreted for visitors to Natchez Trace Parkway.

    Any possible disturbance of the cultural setting of the area would be mitigated through access road design elements that would take into consideration the historical setting of the area. Plantings would be in keeping with the tree-canopied landscape and would avoid the disturbance of any known archeological resources. Inadvertent discoveries would be dealt with according to the wishes of the tribal entities (Choctaw Nation) directly affiliated with the Choctaw Agency site and the Old Trace segment in the project area.

17. Comment: Old Agency Road was named to the National Historical Register in 1995. It was placed on the national register because of its living history and because it is an in-use road. Closing all or a portion of Old Agency Road would have an adverse effect because the historical significance of the road would be destroyed. It would deprive the state of Mississippi of one of its most precious artifacts.

    Commenter (representative): Sandra Vance, Old Agency Road Historic Preservation Society, Inc.

    Response: Effects on historical resources is one of the major factors the National Park Service has considered in analyzing the five alternatives, plus the revised proposed action. While the Natchez Trace is undoubtedly the oldest formal road in Mississippi, and while the portion that has become known as Old Agency Road may be one of its oldest active segments, there are other examples of the Natchez Trace in active use throughout this state, as well as in Tennessee and Alabama.

    Based on an NPS survey, there are approximately 100 total miles of the original Natchez Trace within park boundaries; about 10 percent of this mileage is in Mississippi. Since an estimated 70 percent of the Natchez Trace Parkway is in Mississippi, an overwhelming proportion of the historic Old Trace in the state is nonfederally owned. According to the Mississippi Department of Archives and History, no formal survey of the extant Natchez Trace has been undertaken that could establish a context for what portions of the road remain, or may have been incorporated into modern use, or that could substantiate the claim that Old Agency Road is the oldest extant example of the Old Trace or any other road in Mississippi.

    Parkway designers realized from the inception of the Natchez Trace Parkway that in the process of constructing a modern, recreational motor road, some segments of the original Natchez Trace would be adversely affected due to constructing a modern-day parkway motor road. The National Park Service entered into a memorandum of agreement with the state historic preservation offices of Tennessee, Alabama, and Mississippi in 1983 to provide for mitigating those adverse impacts. The parkway has been continuously constructed under those guidelines agreed to by the state preservation officers.

    That part of the Old Agency Road (Old Natchez Trace) that is listed on the National Register of Historic Places runs west from the town of Ridgeland and terminates at Livingston Road. The abstract/summary of the national register evaluation sheet (94001579) lists the Old Agency Road and the Choctaw Agency site as "significant for association with the historic Natchez Trace, an important late 18th – early 19th century footpath and road connecting Natchez on the Mississippi River with Nashville on the Cumberland River." Restoration of closed sections of Old Agency Road to Old Trace appearances as a footpath would be in keeping with the national register nomination.

    The total distance of Old Agency Road (Old Natchez Trace) listed on the national register nomination is about 3.3 miles, of which 1.4 miles is within the right-of-way of the Natchez Trace Parkway. The remaining 1.9 miles of Old Natchez Trace located outside the NPS boundary either have been or will be altered significantly by the city of Ridgeland. Old Agency Road just east of Highland Colony Parkway is planned to be widened to six lanes to I-55, with a traffic rotary/circle being planned at the intersection of Old Agency Road and Highland Colony Parkway. Jackson Street (also part of the Old Natchez Trace) just east of I-55 was widened to three lanes to US 51 through the city of Ridgeland, all within the limits of the national register boundaries.

Historical records indicate that as of 1935, an estimated 61 percent (or about 283 miles) of the original Natchez Trace was in active use in Tennessee, Alabama, and Mississippi. There is no estimate as to how much of the Old Trace has been obliterated during the past 60 years. In the 1960s when ownership of this segment of Old Agency Road was transferred to the National Park Service, it was a simple, graveled thoroughfare that was more in keeping with the appearance of the Natchez Trace during its period of historical significance (1780–1830). The National Park Service has traditionally restored and maintained the portions of the original Natchez Trace under its management to this period of significance, not to subsequent eras.

18. Comment: Statements on pages 105, 106, and 115 of the *Draft Supplemental Environmental Impact Statement* indicate that the bridge in alternative 4 would "visually intrude on the historical setting of the road corridor" and "irreversibly intrude on the historical setting of the historic Old Natchez Trace." Analyze the effects of a smaller, scenic bridge further west. It is believed such a bridge would preserve the historical setting.

    Commenter (representative): Old Agency Road Historic Preservation Society, Inc.

    Response: The National Park Service does not believe that such a bridge would preserve the historical setting. The tree-lined tunnel appearance would be visually impacted by any bridge crossing over Old Agency Road from either direction. Constructing a bridge and approach fills would impact trees adjacent to Old Agency Road, as explained in the response to comment 4. Any bridge crossing Old Agency Road would visually intrude on the historical setting of the road corridor and would irreversibly intrude on the historical setting of the historic Old Natchez Trace.

19. Comment: To help mitigate noise and visual impacts to Greenwood Plantation in alternative 5, the access road from Old Agency Road Relocated to Brame Road should be moved as far north as is feasible while still meeting safety requirements. Other mitigation methods to screen traffic and minimize noise from Greenwood Plantation should include a noise wall from Brame Road to Dinsmor.

    Commenter: Rick Redmont

    Response: A noise wall would not be in keeping with the historical setting of the Old Natchez Trace, Greenwood Plantation, or the Natchez Trace Parkway, which is eligible for listing on the National Register of Historic Places. Although project 3P13 would not be a contributing element of the national register nomination, its setting should be designed and constructed in keeping with the overall design of the Natchez Trace Parkway. Noise walls are not found in any other location along the Natchez Trace Parkway and would detract from the accepted and approved design of the parkway itself. The mitigation of noise and visual impacts would be accomplished through vegetative screening and separation of the parkway from its surrounding neighbors.

Environmental Justice

20. Comment: The *Draft Supplemental Environmental Impact Statement* states on page 64 and page 129 that no environmental justice impacts were identified, but no data or analysis is presented to substantiate this conclusion. The demographics of the affected area should be defined using U.S. Census data (census blocks) and compared to other nearby census block, county, and state percentages for minorities and/or low income populations. If percentages of these populations are

elevated within the project area, alternatives should be considered or coordination with the affected populations should be conducted to determine population concerns.

Commenter: U.S. Environmental Protection Agency

Response: The section in the "Environmental Consequences" chapter entitled "Impact Topics Considered but Dismissed from Further Analysis" has been updated to include information on the demographics of the city of Ridgeland. The demographic information provided by the Ridgeland Chamber of Commerce and data summarized in the *Year 2020 Comprehensive Plan for the City of Ridgeland* substantiates the conclusion that there would be no impacts to minorities or low-income populations in the Ridgeland area. The local population is predominantly white with a per capita income that was the highest in the state in 1990. Ongoing consultation with the Choctaw Nation in Mississippi, Louisiana, and Oklahoma will ensure that their concerns and interests in the Choctaw Agency site are protected and/or mitigated if necessary.

21. Comment: Some commenters stated that property values in the residential areas surrounding the project area could decline with the closure of Old Agency Road in alternatives 1, 2, 3, and 5. Conversely, other commenters stated that property values in surrounding areas could decline if Old Agency Road remained open, but the bridge in alternative 4 was constructed (because of its height and visibility).

    Commenters (representative): Ali and Patsy Lavassani, John Jenkins, Pamela S. Gerity

    Response: A change in property values could occur as a result of any of the alternatives evaluated in the *Final Supplemental Environmental Impact Statement*. There is no method of estimating if changes in property values, either negative or positive, would occur if any of the six alternatives was implemented because many factors that affect property values are beyond the influence or control of this plan. However, since the land for section 3P (the section of the Natchez Trace Parkway around Jackson, Mississippi) was transferred to the federal government in 1967, property values have continued to escalate, and high-income residential developments are continuing to be planned and constructed near the project area. This trend is expected to continue.

Noise

22. Comment: Generally, the U.S. Environmental Protection Agency (EPA) considers all increases over 10 dB(A) at any given noise level as a significant increase. EPA has a *target* noise level (not a guideline or standard) of 55 dB(A) DNL for outdoor areas near residences. If noise impacts are significant at residences just outside the normal width of the right-of-way, relocation of residents should also be considered at the discretion of the affected residents.

    Commenter: U.S. Environmental Protection Agency

    Response: FHWA guidelines for noise analyses were used because the roads are being designed and constructed by that agency in cooperation with the National Park Service, using federal funding. As explained in the sections on noise in the "Affected Environment" and the "Environmental Consequences" (under "Assumptions and Methodologies for Analyzing Impacts") noise abatement criteria (NAC) that were established under 23 CFR 772 were used to assess noise impacts. The upper noise limit for the exterior of residences, schools, hospitals, churches, and other similar facilities is 67 dB(A). The Mississippi state noise policy allows for an increase of 15 dB(A) before a noise impact is deemed significant. Both of these levels are greater than those recommended by the Environmental Protection Agency, but they are within the range established by other federal regulations.

The maximum increase in noise levels for any of the alternatives would be 13 dB(A), which is only slightly higher than the 10 dB(A) increase that the Environmental Protection Agency would deem significant. Screening with vegetation would be the primary mitigation measure to minimize some of the predicted changes in noise levels. Noise walls would not be used because they are not in keeping with the historical setting of the Old Natchez Trace, Greenwood Plantation, or the Natchez Trace Parkway. The relocation of residents would not be an option. As indicated in previous responses, the right-of-way for the parkway in the Jackson area was transferred to the federal government in 1967 for the development of the parkway. The creation of the right-of-way (or project area) precedes the development of the adjacent residential areas, except for Greenwood Plantation.

Transportation/Traffic

23. Comment: In alternatives 1 and 5 the alignment of Old Agency Road Relocated appears to present apparent sight distance and alignment hazards at a number of locations:

    - the eastern connection to Old Agency Road
    - the T intersections for the connectors to Richardson Road and to Brame Road (alternative 1 only), which are substantially less than 90 degrees and too close to the point of curvature
    - the Brame Road connection, which is on the curve of Old Agency Road Relocated
    - the termination of Old Agency at Richardson Road, which is less than a 90-degree turn with insufficient radius

    Commenter: Mayor Gene McGee, City of Ridgeland

    Response: The plans showing the five alternatives are conceptual in nature. During the engineering design phase, all proposed roads and intersections would meet AASHTO standards for sight distance, safety, and alignment. The National Park Service's revised proposed action would meet or exceed all AASHTO standards for intersection design, sight distance, and safety.

24. Comment: In alternatives 1, 2, 3, and 5, the transition from an improved Old Agency Road Relocated that promotes higher speeds to Old Agency Road with its low speeds, narrow width, and no shoulders could result in an excessive number of vehicle crashes.

    Commenter (representative): Mayor Gene McGee, City of Ridgeland

    Response: Vehicle speed limits along Old Agency Road and the proposed Old Agency Road Relocated would be regulated and enforced by the city of Ridgeland. Vehicle speed limits should be reduced according to the complexity of the transition between the newer higher standard roads and the existing, narrower Old Agency Road. The transition in roadway character need not be sudden nor surprising. Changes in roadway environment are very common and are often handled with the use signs notifying drivers of "Speed Zone Ahead" or "Road Narrows," in addition to speed limit postings. In addition, other treatments such as traffic control or pavement texturing can be applied to heighten driver awareness. This is an operational issue for the city of Ridgeland. The National Park Service would work with the city to ensure that new roads in the project area were designed to help address safety-related issues.

The National Park Service's revised proposed action has reduced the potential for conflict and accidents by proposing a crossover road that would bridge over the parkway motor road and connect Old Agency Road Relocated on the south side of the parkway with Old Agency Road (east of Richardson Road) on the north side of the parkway. Vehicles would be required to make a complete stop before transitioning onto Old Agency Road on the eastern side of the project area.

25. Comment: East-west traffic would not be accommodated in alternatives 1, 3, and 5 because no additional lane capacity is provided nor in alternative 2 because Old Agency terminates at Richardson Road. In addition, some east-west traffic corridors proposed in the Ridgeland Transportation Plan have not been implemented outside the project area due to a lack of support. Therefore, some city traffic corridors would be impacted by alternatives in the *Draft Supplemental Environmental Impact Statement.*

    Commenter: Mayor Gene McGee, City of Ridgeland

    Response: During the course of development of the Natchez Trace Parkway over the last 60 years the National Park Service has worked closely with all county, city, and state road officials to maintain existing traffic patterns as closely as possible where roads are severed. All relocated roads are designed and constructed to present standards in terms of width and design speed and to accommodate existing traffic capacity. Additional lane capacity to increase future traffic flow has been the responsibility of the respective road system owner. The National Park Service's revised proposed action allows current traffic flows to be maintained as closely as possible, while increasing traffic flow to and from Highland Colony Parkway along Old Agency Road Relocated, at the request of the city of Ridgeland.

26. Comment: As noted on page 104, Natchez Trace Parkway would most likely not provide an alternative route for commuters who are already using the segment of the parkway motor road east of I-55 because of the very limited access points in the Ridgeland vicinity. Access would be limited to Old Canton Road, U.S. Highway 51, and I-55 to the east of the project vicinity, and then many miles to the west at U.S. Highway 49, well outside of Ridgeland. This very limited access should curtail any significant commuter usage of the parkway.

    Commenter: Mayor Gene McGee, City of Ridgeland

    Response: The National Park Service does not concur. It is anticipated that commuter traffic would continue along the parkway motor road, entering and exiting by way of access points along its entire route through Ridgeland and Clinton.

27. Comment: Travel times for local drivers would increase in alternative 5 (see page 115 of the *Draft Supplemental Environmental Impact Statement*) because of the closure of Old Agency Road. Some respondents indicated that this change in time would be more than a "minor negative impact." Access to the shops and services of Ridgeland via West Jackson Street would be more circuitous and time consuming for residents in areas such as the Dinsmor neighborhood.

Commenter (representative): Lynn H. Mahlum; Old Agency Road Historic Preservation Society, Inc.

Response: In alternative 5 there would be a negligible increase in travel time between Dinsmor Crossing and U.S. 51. In fact the improved road surface and cross section of Old Agency Road Relocated should permit a decrease in travel time from that at present. In the revised proposed action through-traffic would travel approximately 325 meters (0.2 mi) farther than under present conditions because of the closure of Old Agency Road. However, distance is not the only determinant of travel time. The revised proposed action would provide additional capacity in the corridor, improving east-west travel times in two ways. First, the parkway would attract some through-commuter traffic away from Old Agency Road. Second, Old Agency Road Relocated would not have the design constraints of the existing Old Agency Road. Roads with better horizontal and vertical alignment and better clearance (shoulders) and visual environment features can support faster and more consistent travel times. Travel time impacts, if any, should be very minor (less than one minute) and would be due mostly to left-turn delays at Highland Colony Parkway for drivers opting to use Old Agency Road Relocated. Furthermore, providing a bridge over the parkway motor road, as described in the revised proposed action, would give local travelers the option of diverting to the original Old Agency Road for much of their trips to Ridgeland shops and services. Spreading traffic over multiple routes would decrease congestion, and therefore decrease average travel time.

28. Comment: Closure of Old Agency Road could affect the response times of emergency services for local residents.

Commenter: Mimi Deck, president, Jackson Association of Realtors®, Inc.

Response: Emergency vehicle response times for many residents would remain unchanged, but could be improved, especially since most emergency vehicles come from and go to the east by way of Ridgeland Avenue. Under the revised proposed action Old Agency Road Relocated and the crossover road between Old Agency Road and Old Agency Road Relocated would be designed to meet AASHTO safety standards, providing safer and better access between residential areas and emergency service locations (fire stations and hospitals), thus allowing emergency vehicles to make better time. Specifically, providing shoulders on Old Agency Road Relocated would allow cars to pull over to let emergency vehicles pass, whereas Old Agency Road as it exists now does not allow this maneuverability.

In addition, the north-south crossover road would give emergency vehicles an alternative route to Highland Colony Parkway. While the new crossover road would create an additional intersection and would be a slightly longer route, particularly for residents south of the parkway, safety improvements and lower traffic volumes would most likely offset these impacts. Decreased traffic volume on Old Agency Road could also improve response times for residents north of the parkway.

29. Comment: Safety on Old Agency Road continues to be an issue. All types of trucks, including concrete and dump trucks, continue to use the road despite the signs saying "no trucks."

Commenters (representative): Evelyn Randolph; Mary Lou Monahan

Response: The city of Ridgeland has posted signs on Old Agency Road to prohibit trucks; however, trucks continue to use Old Agency Road even though there is a viable alternative route to the south (County Line Road). Enforcing the no-trucks regulation is a local law enforcement issue.

30. Comment: In alternative 4 the construction of Old Agency Road Relocated would have major rather than moderate impacts on the reduction of traffic volumes on Old Agency Road. Traffic volumes east of Richardson Road would decline from the current level of 10,000 vpd to approximately 6,000 vpd. Volumes west of Richardson to the new connection with Old Agency Road Relocated would decline from 4,500 vpd to approximately 1,000 vpd. These reductions would substantially improve the LOS on Old Agency Road from its current LOS of D to C and A for the two segments mentioned. Safety would also be moderately improved rather than minor as reported on page 205 in the *Draft Supplemental Environmental Impact Statement* due to the construction of Old Agency Road Relocated. This new road would divert approximately 4,000 vpd and substantially improve the LOS and safety on Old Agency Road for segments east of Whippoorwill.

Commenter: Wagonner Engineering (in a letter submitted to the city of Ridgeland)

Response: With the development of Old Agency Road Relocated in alternative 4 it is assumed that between 6,000 and 8,000 vpd would use Old Agency Road, compared to 10,000 vpd at present. Safety would also be improved. The degree of the improvements would depend on the distribution of traffic following the construction of Old Agency Road Relocated.

The National Park Service's revised proposed action would separate traffic volumes through the construction of Old Agency Road Relocated to Highland Colony Parkway while maintaining the existing volume of traffic on Richardson Road. The revised proposed action would also provide for a crossover between Old Agency Road and Old Agency Road Relocated to maintain the north-south traffic flow between the Dinsmor, Windrush, and Canterbury subdivisions.

Land Use and Transportation Plans

31. Comment: The impact analysis and summary table in the *Draft Supplemental Environmental Impact Statement* indicates that alternatives 1, 2, 3, and 5 are consistent with the Ridgeland's Transportation Plan. This is incorrect because these alternatives do not leave Old Agency Road open in its current state nor do they provide additional lane capacity in Old Agency Relocated. The Transportation Plan identified the construction of Old Agency Relocated as a 5-year priority. Ridgeland intended to leave Old Agency Road in its current alignment and provide additional capacity and access to Greenwood Plantation, Dinsmor Crossing, and Brame Road via the construction of Old Agency Relocated.

Commenter: Mayor Gene McGee, City of Ridgeland

Response: The text in the "Summary of Alternatives and Environmental Consequences" table and in the "Environmental Consequences" chapter, under the subsection entitled "Consistency with Local Transportation Plans," failed to distinguish between two different local transportation plans. The two plans that are now discussed in the "Affected Environment" and the "Environmental Consequences" chapters of the *Final Supplemental Environmental Impact Statement*, as well as in the summary table, are *The Jackson Urbanized Area's Transportation Plan for the Year*

2020 and the 1996 *Transportation Plan Update for City of Ridgeland, Mississippi*. Any inaccurate or unclear text has been changed appropriately.

All the alternatives are consistent with *The Jackson Urbanized Area's Transportation Plan* because it recommends the development of the Natchez Trace Parkway from the Hinds County line north and east through the project area to I-55. The Jackson plan does not identify improvements for Old Agency Road or the development of Old Agency Road Relocated west of Highland Colony Parkway.

Alternatives 1, 2, 3, 5, and the revised proposed action are consistent with the 1996 *Ridgeland Transportation Plan Update* as written. This city plan calls for the relocation of Old Agency Road (see section 4.7, item 11) and the development of the Natchez Trace Parkway through the project area. No specific reference is made to the disposition of Old Agency Road from Highland Colony Parkway west to Whippoorwill Road. The *Year 2020 Comprehensive Plan for the City of Ridgeland* (Central Mississippi Planning and Development District), which was published in draft form in 1999, does identify a proposed collector road from Whippoorwill Lane to Brame Road along the southern boundary of the project area, but it does not connect with Highland Colony Parkway.

The proposed extension of Old Agency Road Relocated to Highland Colony Parkway in the revised proposed action would provide some additional east-west traffic capacity and improve traffic operations on Old Agency Road. Old Agency Road would continue to provide local access to the Windrush and Canterbury subdivisions. Old Agency Road Relocated would accommodate most through-traffic and local traffic from Dinsmor, Greenwood Plantation, and Brame Road. Estimated volumes on both roads would be within the threshold for collector roadways.

32. Comment: Text on page 19 in the *Draft Supplemental Environmental Impact Statement* states that Old Agency Road would be improved east to Highland Colonny Parkway to accommodate variations in traffic movements from an improved Old Agency Road Relocated, yet the exhibit on page 20 indicates that Old Agency will be left as is. How can it be left as is, but be improved?

Commenter (representative): Mayor Gene McGee, City of Ridgeland

Response: The National Park Service would work with the city of Ridgeland and the Mississippi Department of Archives and History to ensure that new roads designed by the Federal Highway Administration, such as Old Agency Road Relocated, would transition safely into Old Agency Road through safety measures and design features outlined in the response to comment 24. Changes to Old Agency Road would be under the jurisdiction of the city of Ridgeland and could be made in consultation with the National Park Service and the Mississippi Department of Archives and History.

Visual Resources

33. Comment: Table 2 in the *Draft Supplemental Environmental Impact Statement* uses subjective words such as "extended," "higher," and "longer" to describe the bridge in alternative 4. Why are the other bridge alternatives not described in a similar negative fashion?

Commenter (representative): Mayor Gene McGee, City of Ridgeland

Response: The new visual simulation provided with each alternative description in the "Alternatives, Including the Proposed Action" chapter of the *Final Supplemental Environmental Impact Statement* illustrates that the bridge in alternative 4 would be longer and higher because of the skew of the bridge as it crosses Old Agency Road. These graphics and approximate measurements of each bridge's height and length have been used to update the visual impact analysis presented in the "Environmental Consequences" chapter. The response provided to comment 3 above specifically addresses why the bridge in alternative 4 would be longer than other proposed bridges. Additionally, the response to comment 4 describes why a shorter bridge in another location, such as that proposed by the city of Ridgeland, would not be feasible.

34. Comment: The proposed "higher and longer" bridge in alternative 4 would not cause "long-term major visual impacts." The city of Ridgeland has demonstrated that a shorter bridge span can be built and visual impacts can be mitigated by vegetative screening.

Commenter (representative): Mayor Gene McGee, City of Ridgeland

Response: Responses to comments 3 and 4 above explain why the proposed bridge in alternative 4 would be higher and longer and why a shorter bridge in a different location within the project area would not be feasible. Response to comment 4 also describes how the visual impact of the proposed shorter bridge could be more adverse than other alternatives because construction of the bridge structure and approach fills could impact trees adjacent to Old Agency Road. Any bridge structure would result in the loss of the tree-lined tunnel appearance of Old Agency Road from either direction.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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ACTION BY:

July 10, 2000

4EAD

Superintendent Wendell A. Simpson
Natchez Trace Parkway
2680 Natchez Trace Parkway
Tupelo, Mississippi 38801

RE: **EPA Review and Comments on**
Draft Supplemental Environmental Impact Statement (DSEIS)
Natchez Trace Parkway, Old Agency Road Area (Section 3P13)
Madison County, Mississippi
CEQ No. 000135

Dear Superintendent Simpson:

Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) has reviewed the subject Draft Supplemental Environmental Impact Statement (DSEIS). The document provides information to educate the public regarding general and project-specific environmental impacts and analysis procedures. We appreciate your consistency with the public review and disclosure aspects of the NEPA process, and note the public interest and involvement in this project.

The NPS proposes to construct a section the Natchez Trace Parkway through the city of Ridgeland, Mississippi. This DSEIS analyzes alternatives for construction of the Parkway through Ridgeland. The document presents five alternative alignments for construction, and discusses their impacts.

Based on our review, we rate the DSEIS "EC-2", that is, we have environmental concerns about the project, and more information is needed to fully assess the impacts. The project area contains historic, archeological and cultural sites which may be impacted by the project, therefore, cultural resource issues and impact mitigation for historic sites warrant further detailed discussion in the Final SEIS. We also have concerns regarding the long-term impacts to wetlands that would occur if any of the five alternatives (including the No-Action Alternative) are implemented. Furthermore, the DSEIS states that no Environmental Justice impacts were identified, but does not present data to show that an analysis was performed to substantiate this conclusion. Our detailed comments are attached.

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Thank you for the opportunity to comment on this project. If you have any questions or require technical assistance you may contact Ramona McConney of my staff at (404) 562-9615.

Sincerely,

For Gerald J. Miller

Heinz J. Mueller, Chief
Office of Environmental Assessment

Attachment

Comments on
Draft Supplemental Environmental Impact Statement (DSEIS)
Natchez Trace Parkway, Old Agency Road Area (Section 3P13)
Madison County, Mississippi
CEQ No. 000135

Purpose and Need: Further detail is needed regarding the purpose and need for this project. While the document states that the proposed construction will help fulfill a NPS plan which has been underway for 60 years and fulfill a legislative mandate, the NPS also states that there is a current transportation need for the proposed parkway segment. The document states that this parkway segment would facilitate regional travel for area motorists, but does not include a detailed map showing existing roadways and travel routes already present in the region to demonstrate exactly how the proposed parkway segment would help motorists. The document specifically states that this parkway segment would eliminate the need for a detour through the greater metropolitan area of Jackson, Mississippi, but does not identify on a map where this current detour route is located compared to the proposed Natchez Trace Parkway Section 3P13 alignment alternatives.

Purpose and need documentation should clearly identify and describe the underlying problem(s) and/or deficiency that requires a need for action. The data and analysis substantiating the problem(s) or deficiency identified should be presented in the NEPA document. The document should show whether or not construction of the proposed parkway alignment is appropriate given current conditions and potential impacts.

Alternatives: The DSEIS identifies Alternative 5 as the proposed action. The DSEIS also describes four other alternative parkway segment alignments.

All the alternatives (including the no-action alternative, which is the 1978 parkway section design) include long-term adverse impacts to wetlands. Please explain why an alternative that avoids impacts to wetlands was not presented.

The selected alternative should avoid or minimize adverse impacts, so that the need for mitigation of impacts will be lessened or eliminated. A critical factor of the alternatives analysis is the avoidance/minimization of adverse impacts.

Endangered Species: We note that no federally-protected species are listed for the area by the U.S. Fish and Wildlife Service (FWS). EPA principally defers to the FWS regarding endangered species assessments and encourages NPS to continue coordination with the FWS as appropriate.

Biodiversity: Biodiversity is defined as the variety of plants and animals (biota) of a site or region, and is typically measured by the number of different species and number of individuals per species. In general, the more diverse an area is (number of habitat types and animal inhabitants) and the better represented these components are (population counts), the more rigorous (resistant, undisturbed, natural, "healthy") the area is considered.

The Final SEIS should discuss biodiversity aspects of the proposed action. For example, will the project increase, restore, or decrease biodiversity of the area or region? Coordination with the U.S. Fish and Wildlife Service (FWS), and the Mississippi Department of Wildlife, Fisheries, and Parks is recommended regarding the design of any project mitigation areas to enhance or restore biodiversity.

Cultural Resources and Historic Preservation: We appreciate the discussion of historic and cultural resource issues in the document. The Final SEIS should also give details regarding progress made toward resolution of the Section 106 issues concerning the project's impacts, and proposed mitigation measures for those impacts.

Page 40 states "...upon selection of a preferred alternative, [NPS] will prepare a revised memorandum of agreement..." However, throughout the document, Alternative 5 is referred to as the "proposed action." Please clarify whether or not a specific alternative has already been selected.

All five alternatives include loss of the historic access to Greenwood Plantation, a site which is eligible for the National Register. Please give further information regarding mitigation measures in the Final SEIS. Alternatives 4 and 5 also include long-term and major adverse impacts to the visual character of the area, according to the DSEIS. This impacted area includes a portion of Old Agency Road (Old Natchez Trace) which was listed on the National Register of Historic Sites in 1995, according to the DSEIS. Specific impacts and mitigation measures for the Choctaw Agency Site (also listed on the National Register) and the additional archeological sites mentioned on page 42 should also be discussed in the Final SEIS.

Please clarify what is meant by the statement that "it is possible that the access road would disturb the cultural setting of the area," which is included in the *Archeological Resources* discussion for each alternative.

There is no information in the DSEIS regarding whether the NPS has consulted with the Choctaw Tribe and other concerned Native American tribes during the scoping process regarding cultural and archeological issues. Please clarify, and give information in the Final SEIS regarding proposed measures to mitigate impacts to the Choctaw Agency site.

We note that the SHPO's office removed themselves as a consulting party for this project's Section 106 review, and that the NPS is coordinating with the Advisory Council on Historic Preservation (Appendix C).

Environmental Justice (EJ): Consistent with Executive Order 12898 (2/11/94), potential EJ impacts should be considered in the NEPA document. An EJ survey ensures equitable environmental protection regardless of race, ethnicity, economic status or community, so that no segment of the population bears a disproportionate share of the consequences of environmental pollution or impacts attributable to a proposed project.

This DSEIS presents no data showing that an EJ survey has been completed. There is no indication in the DSEIS regarding whether the Choctaw Tribe and other concerned Native American Tribes were consulted regarding potential impacts to the archeological and cultural sites in the project area. The DSEIS states on page 64 and page 129 that no EJ impacts were identified, but the document does not present data or discuss analysis of data to substantiate this conclusion.

The demographics of the affected area should be defined using U.S. Census data (Census blocks) and compared to other nearby Census block, county, and state percentages for minorities and/or low-income populations. If percentages of these populations are elevated within the project area, alternatives should be considered, or coordination with affected populations should be conducted, to determine the affected population's concerns and comments on the project. This coordination should include a clear discussion of the project, project updates or expansions, inclusion of the affected population (or their community leader, pastor, or equivalent) on the NEPA document mailing list, any economic benefits (job opportunities, etc.) of the project to the affected population, and the opportunity for informal and/or formal comments (e.g., EIS scoping meeting and EIS public hearing, or other public meetings). Regardless of the makeup of the affected population, impacts of the project should be controlled so that significant effects on human health are avoided and/or minimized.

Wetland Impacts: All the alternatives (including the no-action alternative, which is the 1978 design plan) include long-term adverse impacts to wetlands. The proposed action, Alternative 5, describes permanent filling of 1.4 wetland acres, reduction of wetland areas by 25%, and a total of 22.5-acres of vegetation being impacted, according to the DSEIS. The DSEIS calls this "irretrievable commitments of resources," but does not give detailed information regarding impact mitigation for these losses.

However, every effort should be made to avoid destroying wetlands, especially those of higher quality, and preserve drainage ways that provide habitat and travel corridors for wildlife. A draft mitigation plan to compensate for predicted wetland losses should be developed during the NEPA process. Feasible alternatives that avoid wetland impacts should be consistent with the 404(b)(1) guidelines of the Clean Water Act. However, the DSEIS does not include any alternatives which avoid impacts to wetlands. Please explain why. The Final SEIS should also discuss how wetlands were delineated (i.e., COE, contractor, lead agency, etc.)

The proposed project should include detailed plans to offset unavoidable wetland losses to the extent possible. Compensation site(s) should be located and described, and details regarding enhancement or creation techniques to be used at the sites should be included. The site layout should be designed to avoid or minimize direct and indirect impacts to wetland water quantity and quality. For example, parking lots or access roads could block existing drainage ways that supply water to wetland areas, potentially altering wetland hydrology.

Please clarify the discussion on pages 26-27 regarding stream corridors and wetlands, which describes wetland mitigation measures during the construction phase of the project. The document states that the mitigation measures during construction would "reasonably protect streams, wetlands, and associated aquatic life from the potential effects of soil erosion and sedimentation during both the construction and operation" of the parkway segment. This conflicts with the information given in the *Unavoidable Adverse Effects* and *Irretrievable Commitments of Resources* discussions for each of the five alternatives, which describe wetlands being permanently filled to construct new roads, reduction in size of wetlands, and remaining wetland segments becoming fragmented. Please explain.

Ultimately, if the selected alignment includes disturbance of five or more acres of land during construction, and includes point source discharges into waters of the United States (i.e., water bodies such as rivers, lakes, wetlands, etc.), coverage under an EPA storm water National Pollutant Discharge Elimination System (NPDES) General Permit may be required. Contact the Mississippi Department of Environmental Quality for further information on the NPDES program.

Noise: EPA appreciates the discussion of noise impacts contained in the DSEIS. Generally, EPA considers all increases over 10 dBA at any given noise level as a significant increase. EPA has a *target* noise level (not a guideline or standard) of 55 dBA DNL for outdoor areas where people spend a varying amount of time (such as residences). If noise impacts are significant at residences just outside the normal width of the right-of-way, relocation of residents should also be considered at the discretion of the affected residents. Avoiding noise impacts via alignment shifts is frequently more effective than mitigation of impacts.

STATE OF ALABAMA

DON SIEGELMAN
GOVERNOR

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MONTGOMERY, ALABAMA 36130

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Natchez Trace Parkway

✓	SUPERINTENDENT	WS
	ADMINISTRATION	
	MAINTENANCE	
	RANGER ACTIVITIES	
✓	RESOURCE MANAGEMENT	5-25-00
	DRC	
ACTION BY:		

May 18, 2000

Mr. Wendell A. Simpson
Superintendent, National Trace Parkway
United States Department of the Interior
National Park Service
2680 Natchez Trace Parkway
Tupelo, Mississippi 38801

Dear Wendell:

Thank you for sending me a copy of the Draft Supplemental Environmental Impact Statement for the construction of the segment of the Natchez Trace Parkway through Ridgeland, Mississippi. I am grateful to receive this material and appreciate your taking the time to share it with me.

I am forwarding this information to Mack Roberts of the Department of Transportation for his review.

I look forward to staying in touch with you and hope you will contact my office if I may be of any assistance.

Thanks, again, and best regards.

Sincerely,

Don Siegelman
Governor

DS/me/ar

cc: Mr. Mack Roberts

Mississippi Department of Archives and History

Post Office Box 571 • Jackson, Mississippi 39205-0571 • Phone 601 / 359-6850 • Fax 601 / 359-6975
Elbert R. Hilliard, Director
Established 1902

JUN 16 2000

☑	SUPERINTENDENT	WS
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ACTION BY:		

June 14, 2000

Mr. Wendell A. Simpson
Superintendent
Natchez Trace Parkway
2680 Natchez Trace Parkway
Tupelo, Mississippi 38801

Dear Mr. Simpson:

Thank you for providing the Mississippi Department of Archives and History with the Draft Supplemental Environmental Impact Statement for the construction of the seqment of the Natchez Trace Parkway through the Old Agency Road area. As you know, the Department of Archives and History, acting in its capacity as the State Historic Preservation Office for Mississippi, has previously withdrawn from the Section 106 consultation process for this particular project.

We appreciate all that you and your colleagues have done to develop the Supplemental Environmental Impact Statement that addresses all of the alternatives for construction of the Parkway through the Old Agency Road area. If we can be of any assistance to you with this project in terms of providing information from our files or offering specific, informal advice or counsel, please do not hesitate to contact us. At the same time, we think it is the most appropriate course of action, having formally withdrawn, not to re-enter the Section 106 consultation process. Our Review and Compliance Officer, Tom Waggener, has discussed this at some length with Craig Stubblefield and will be happy to provide any additional information that may be needed.

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Mr. Wendell A. Simpson
Page Two
June 14, 2000

We look forward to working with the Natchez Trace Parkway on future projects. With every good wish, I am

Sincerely,

Elbert R. Hilliard
State Historic
Preservation Officer

ERH:cs

THE CITY OF
RIDGELAND

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Gene F. McGee

CITY CLERK
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Scott Jones, Ward 5
Linda Davis Trunzler, Ward 6
Gerald Steen, At-Large
Mayor Pro Tempore

MEMORANDUM

Received
JUN 15 2000
Natchez Trace Parkway

TO: National Park Service

FROM: Mayor Gene McGee

SUBJECT: Draft Supplemental Environmental Impact Statement
Natchez Trace Parkway - Old Agency Area (Section 3P13)
Ridgeland, Mississippi

DATE: June 15, 2000

I have reviewed the Draft EIS and have several comments to be placed in the record.

Alternative #1

- The alignment of Old Agency Relocated appears to present apparent site distance and alignment hazards at the following locations (reference p. 12):

The eastern connection to Old Agency Road.
The approach angle of the "T" intersection for the connector to Richardson appears to be substantially less than 90 degrees and is too close to the point of curvature.
The location of the Brame Road connection is in a curve on Old Agency Relocated.
The approach angle of the "T" intersection for the Brame Road connector to Old Agency Relocated appears to be substantially less than 90 degrees.
The termination of Old Agency at Richardson Road presents a 90 degree turn with insufficient radius, which is not a suitable situation.

- We are concerned about motorists approaching Old Agency Relocated from any direction via

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the existing network which includes low speed narrow roads with no shoulders then transitioning to the improved Old Agency Relocated which promote higher speeds then suddenly back onto the low speed narrow roads. We anticipate that these transition areas will generate an excessive number of crashes (reference p. 12).
- This alternative does not accommodate east/west traffic, no additional lane capacity is provided.
- This alternative is not consistent with Ridgeland's Transportation Plan, in that it does not leave Old Agency Road open in its current state nor does it provide additional lane capacity in OLD AGENCY ROAD RELOCATED (p.34).

Alternative #2

- The termination of Old Agency at Richardson Road presents a 90 degree turn, with insufficient radius, which is not a suitable situation (p. 14).
- We are concerned about motorist approaching Old Agency Road from the east direction via the improved Old Agency Relocated which would promote higher speeds then suddenly back onto the low speed narrow Old Agency Road. We anticipate that this transition area will generate an excessive number of crashes (reference p. 14).
- This alternative would create significant relocation of local traffic patterns for Old Agency Road, both through and local traffic (p. 31 & 81).
- This alternative does not accommodate east/west traffic, because Old Agency it terminated at Richardson Road. (p. 30).
- It is not likely that traffic volumes would remain the same due to the relocations in local traffic patterns (p. 31).
- This alternative is not consistent with Ridge land's Transportation Plan, in that I does not leave Old Agency Road open in its current state nor does it provide additional lane capacity in OLD AGENCY RELOCATED (p. 34).
- Some of the east-west corridors proposed in the Ridge land Transportation Plan have not been implemented due to a lack of support. Thus, existing corridors will be further impacted and congested (p. 82).

Alternative #3

- We are concerned about motorist approaching Old Agency Road from the east direction via the improved Old Agency Relocated which promote higher speeds then suddenly back onto the low speed narrow Old Agency Road. We anticipate that this transition area will generate an excessive number of crashes (reference p. 16).
- This alternative does not accommodate east/west traffic, no additional lane capacity is provided (p. 16 & 92).
- This alternative would create significant relocation of local traffic patterns for Old Agency Road, both through and local traffic (p. 31 & 93).
- It is not likely that traffic volumes would remain the same due to the relocations in local traffic patterns (p. 31).
- This alternative is not consistent with Ridge land's Transportation Plan, in that it does not leave

Page 3

Old Agency Road open in its current state nor does it provide additional lane capacity in OLD AGENCY RELOCATED (p. 34).
- Some of the east-west corridors proposed in the Ridge land Transportation Plan have not been implemented due to a lack of support. Thus, existing corridors will be further impacted and congested (p. 93).

Alternative #4

- The exhibit on page 18 indicates an exaggeratedly long Natchez Trace Parkway bridge crossing Old Agency Road. The bridge appears unnecessarily and considerably longer than any of the other bridge alternatives. In fact, the exhibit indicates that the bridge would span the proposed closed entrance to Dinsmor. Why would the bridge need to span a closed access? We assume that the National Park Service illustrated this bridge so much longer to exacerbate the sensitivity in Windrush Subdivision. Also, Table 2 uses subjective words such as "extended", "higher" and "longer" to describe the bridge on Alternate #4, yet does not describe any of the other three bridge alternatives in a negative sense. We are convinced that an aesthetically pleasing and short bridge span can be used to cross Old Agency Road at this location (p. 18, 35 & 36).
- We do not anticipate the Natchez Trace Parkway would provide an alternate route for commuters who are already using the segment of the parkway motor road east of I-55, because of the very limited access points in the Ridge land vicinity. Access would be limited to Old Canton Road, U.S. Highway 51, and I-55 to the east of the project vicinity, and then many miles to the west at U.S. Highway 49, well outside of Ridge land. This very limited access should curtail any significant commuter usage of the parkway (p. 104).
- Page 34 falsely indicated that Alternative #4 is not consistent with local transportation plans. Ridgeland's Transportation Plan identified the construction of Old Agency Relocated at a cost of $1.1 million as a 5 year priority. Ridgeland intended to leave Old Agency Road in its current state and provide additional capacity via Old Agency Relocated. Old Agency Relocated was budgeted in the plan in the event that it was dropped from the National Park Service plan to extend the Natchez Trace Parkway. Local plans call for construction of a new alignment, Old Agency Relocated, in addition to the current alignment of Old Agency Road to provide access to Greenwood Plantation, Brame Road and Dinsmor Crossing. The Jackson Metropolitan Urbanized 2020 Plan only indicated the committed projects to include the improvements to the I-55/Old Agency Interchange, the Natchez Trace Parkway extension west of I-55, and the improved Old Agency Road between I-55 and Highland Colony Parkway. The exclusion of the new alignment of Old Agency Relocated was likely an oversight in the Jackson Plan. (p.34 & 110).
- Some of the east-west corridors proposed in the Ridgeland Transportation Plan have not been implemented due to a lack of support. Thus, existing corridors will be further impacted and congested (p. 105).
- We do not concede that the proposed "higher and longer" parkway bridge would cause "long-term major visual impacts". We have demonstrated that a shorter bridge span can be built and visual impacts can be mitigated by vegetative screening. In fact, if the vegetative screening had been established in 1993 per our plan, the growth would be quite mature by now and visual

Page 4

impacts of the bridge would not be an issue. (p.112).

Alternative #5

- Text on page 19 states that Old Agency Road would be improved east to Highland Colony Parkway to accommodate variations in traffic movements from an improved Old Agency Relocated, yet the exhibit on page 20 indicates that Old Agency will be left as is. How can it be left as is, but be improved? We interpret this to mean that Old Agency Road will be reconstructed along its current alignment to a typical section similar to Old Agency Relocated.
- The majority of the traffic on Old Agency Road (approximately 7,000 vehicles per day) will be diverted to an awkward relocated Old Agency/Richardson Road alignment to the existing Richardson Road. This new alignment includes two 90 degree turns and one 45 degree turn in a very short distance. (p. 20 & 116).
- The alignment of Old Agency Relocated appears to present apparent site distance and alignment hazards at the following locations (reference p. 20):

The eastern connection to Old Agency Road.
The approach angle of the "T" intersection for the connector to Richardson appears to be substantially less than 90 degrees and is too close to the point of curvature.
The location of the Brame Road connection is in a curve on Old Agency Relocated.
The termination of Old Agency at Richardson Road presents a 90 degree turn with insufficient radius, which is not a suitable situation.

- We are concerned about motorists approaching Old Agency Relocated from any direction via the existing network which includes low speed narrow roads with no shoulders then transitioning to the improved Old Agency Relocated which promote higher speeds then suddenly back onto the low speed narrow roads. We anticipate that these transition areas will generate an excessive number of crashes (reference p. 20).
- This alternative does not accommodate east/west traffic, no additional lane capacity is provided
- This alternative is not consistent with Ridgeland's Transportation Plan, in that it does not leave Old Agency Road open in its current state nor does it provide additional lane capacity in OLD AGENCY REOLCATED. Ridgeland's Transportation Plan identified the construction of Old Agency Relocated at a cost of $1.1 million as a 5 year priority. Ridgeland intended to leave Old Agency Road in its current state and provide additional capacity via Old Agency Relocated. Old Agency Relocated was budgeted in the plan in the event that it was dropped from the National Park Service plan to extend the Natchez Trace Parkway. (p. 34 & 122).

If you should have any questions regarding this memorandum, please contact me.

THE CITY OF RIDGELAND

MAYOR
Gene F. McGee

CITY CLERK
David W. Overby

BOARD OF ALDERMEN
Ann Brame Hurd, Ward 1
Lisa DeCell Walters, Ward 2
Carole A. Davis, Ward 3
Larry Roberts, Ward 4
Scott Jones, Ward 5
Linda Davis Trunzler, Ward 6
Gerald Steen, At-Large
Mayor Pro Tempore

Received
JUL 1 8 2000
Natchez Trace Parkway

July 13, 2000

Wendell A. Simpson, Superintendent
Natchez Trace Parkway
2680 Natchez Trace Parkway
Tupelo, Mississippi 38804

Re: Comments To Be Placed in Record
Natchez Trace Parkway – Old Agency Area (Section 3P13)

Dear Mr. Simpson:

I sincerely appreciate the opportunities that you and the National Park Service have provided for input from all interested parties into the important decision to be made regarding the completion of the Natchez Trace Parkway in the vicinity of Old Agency Road. The City of Ridgeland is vitally interested in seeing these controversial issues resolved and allowing for the completion of this national treasure. We, too, share your concern for resolution, commitment to Park Service design criteria and goals, commitment to the protection and conservation of our precious resources, and the satisfaction of affected parties and potential users of the parkway motor road.

I disagree with the proposed action of the *Draft Supplemental Environmental Impact Statement*'s implementation of Alternate #5. It is The City's documented opinion that this alternative will not serve the best interests of City of Ridgeland, Madison County, the metropolitan area, the state nor the nation. We request that the National Park Service consider the vast amount of input that you received in opposition to Alternative #5, as opposed to requests that serve the interests of a small group of residents. The City is strongly committed to assisting the Park Service in resolving issues and seeking compromise to the benefit of the majority.

Evidence of the City of Ridgeland's commitment to achieve resolution, is the enclosed modification of Alternative #4 to leave Old Agency Road open, provide additional access and capacity with the construction of Old Agency Relocated, and completion of the parkway motor road. This compromise alternative will meet your construction specifications, mitigate the expressed concerns of the residents who live north of Old Agency Road and satisfy the residents of Dinsmor and City of Ridgeland elected officials; thereby, alleviating any litigation concerns and permitting construction on the Parkway to begin. Please find attached a resolution of the Mayor and Board of Aldermen dated July 17, 2000 in support of Alternative #4 Modified.

We have also attached documentation of this modified Alternative #4 which will require a minor adjustment of the Parkway alignment approximately 200 feet south of the proposed location to increase the separation from Windrush and to cross Old Agency Road in a cut section, thus allowing the elevation of the

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bridge to be lower and closer to natural grade. This modification will meet Park Service design criteria and goals. We feel that this alternative involves a reasonable compromise by all parties and will achieve the goals and objectives of all.

We see this option as a reasonable compromise for the National Park Service, the City of Ridgeland, and other interested parties to resolve all conflicts and threats to litigation and allow the immediate construction of the Natchez Trace Parkway through Ridgeland. By shifting the roadway and bridge south by approximately 200 feet and by reducing the elevation of the bridge, visual impact and noise levels will be greatly reduced, thus addressing concerns voiced by residents who live north of Old Agency Road. The City of Ridgeland and Dinsmor will be pleased by leaving Old Agency Road open and by adding capacity and an alternate route in Old Agency Relocated. The City of Ridgeland, Old Agency Road Historic Preservation Society, Inc. and Citizens Against Closing Old Agency Road will compromise the existing tree canopy and will allow Old Agency Road to be lowered, for a distance of 1,000 feet, to facilitate a bridge at this location if this results in allowing Old Agency Road to remain open. Visitors and motorists of the Natchez Trace Parkway will have a national treasure with a completed parkway motor road lying lightly on the land.

Please advise if we can provide any additional information in support of your efforts to determine the feasibility of the proposed modification of Alternative #4.

I will call you next week to schedule a meeting to further explain the enclosed modification to Alternative #4. I'm eager, as is the Board of Aldermen, to resolve all issues that prevent completion of this project; therefore, I'll be glad to come to your office.

Sincerely,

Gene F. McGee

Gene F. McGee, Mayor
City of Ridgeland, Mississippi

Enclosure (3)
Memorandum from Waggoneer Engineering, Inc.
Engineering Drawings and Documentation of Alternate #4 Modified
Resolution of Mayor and Board of Aldermen, City of Ridgeland, adopted July 12, 2000, endorsing Alternate #4 Modified.

Cc:
The Honorable Chip Pickering
The Honorable Trent Lott
The Honorable Thad Cochran
The Honorable Roger Wicker
The Honorable Bennie Thompson
The Honorable Ronnie Shows

Received
JUN 15 2000
Natchez Trace Parkway

Brian Barcellona
103 Windsor Court
Ridgeland, Mississippi 39157
June 14, 2000

Wendell A Simpson, Superintendent
Natchez Trace Parkway
2680 Natchez Trace Parkway
Tupelo, Mississippi 38804

Dear Mr. Simpson,

My name is Brian Barcellona, As vice-president of the Canterbury Homeowner's Association, I have been chosen to represent the sixty-seven homeowners of the Canterbury Subdivision on matters regarding the Natchez Trace. I am also a former Alderman for the City of Ridgeland. I served in that capacity from nineteen eighty-nine to nineteen ninety-seven. While serving on the board of Aldermen the matter of the Natchez Trace construction in the area of Old Agency Road was a topic of discussion many times.

My first work as an Alderman was on the future construction revolved around the Land Use and Thoroughfares Master Planning modifications due to the construction for the then proposed Highland Colony Parkway. At this time we were working with property owners and the Park Service Officials to establish the master plans as well as begin the negotiations for the purchase for right of way for the Highland Colony Parkway. The Decisions made by me and the other Aldermen for the establishment of these Master Plans as well as decisions subsequently to approve plats and re-zoning requests was based on the Original Plans for completion of the Natchez Trace submitted to us by the Park Service. All of this careful planning resulted in our allowing the construction of the Canterbury Subdivision homes and the Windrush Subdivision homes along the Trace right of way. My recollection of conversations with Mark Jordan who is the Developer for the Dinsmor Subdivision were that his plans were made with understanding that a portion of Old Agency Road beginning west of Richardson Road would be Original Plan to closed.

In nineteen ninety-two The Park Service notified Mayor Gene McGee hat they were ready to complete the final portion of the Natchez Trace. At that time there were a few residents opposed to the Original Plans for construction. This group called itself the Old Agency Road Historic Preservation Society. The group is lead by Sandra Vance. This group had been working to keep the road open since 1987. At this point Mayor McGee decided to have Joe Waggoner draw up alternatives to the original Park Service Plans. The work performed by Mr. Waggoner was not approved by the Board Alderman of the City of Ridgeland. In fact we expressed our anger with the Mayor when we were unaware with these plans and a few residents that had obviously seen the plans prior to the board meeting.

The residents of Canterbury Subdivision favor the 1978 plan. The plan known as Alternative one would not harm our neighborhood. It would provide for a safer Old Agency road on which to travel. Many homeowners liked the fact that Old Agency would be removed west of Richardson road. We feel that this would add to the safety and seclusion of our neighborhood.

Alternative five would cause unwanted noise due to the bridge and intersection being directly behind our homes. It would most certainly result in removal many of the trees that line the south side of Old Agency road. The Y intersection would provide an additional safety hazard to motorists traveling east on Old Agency.

Please be aware that we will not favor any plan that includes a bridge near our neighborhood. We are against consideration of plans three and four as they would have obvious detrimental effects on our property values. Homeowners of our neighborhood will vigorously fight the adoption of these plans.

Sincerely,

Brian Barcellona

FRIENDS OF OLD AGENCY ROAD

P. O. BOX 1645
Ridgeland, MS 39158

July 12, 2000

Mr. Wendell Simpson,
Superintendent
Natchez Trace Parkway
2680 Natchez Trace Parkway
Tupelo, MS

Received
JUL 1 7 2000
Natchez Trace Parkway

RE: Old Agency Road, Alternative 4 Modified

Dear Mr. Simpson:

This is to advise of the support by Friends of Old Agency Road for the captioned plan or alternative for completing the Parkway near Ridgeland known as Plan or Alternative 4 Modified.

You have indicated that it is your agency's desire and intent to close a portion of Old Agency Road, and that you will proceed with Plan 5 to obtain that result.

You have also been generally supported in your desire to close the road by a small group of individuals from the Windrush subdivision voicing concerns about the proposed bridge over Old Agency Road as creating some kind of invasion of their privacy and thus contributing to diminishment of their property values.

We believe that the existing Alternative 4, and particularly designs on this basis which incorporate the environmentally sensitive enhancements suggested and emphasized by the City of Ridgeland in positions consistently put forward to you over many years, will be the least disruptive generally, and recognized by reasonable men to be a plan that will not cause or create the problems feared by the Windrush few.

However, even as the Windrush few continue their obstinate refusal to discuss any form of compromise, the City of Ridgeland has again gone back to the drawing board and had its engineers develop yet another new plan which would (1) further remove any bridge and necessary construction activity from Windrush by over 300' or more, (2) which would take advantage of natural topography by cutting and lowering the Old Agency roadbed by some ten (10') feet, and (3) which would lower the top of any bridge needed to cross Old Agency by several feet.

These changes would have the cumulative effect of rendering the proposed bridge virtually invisible from any residence in Windrush, and should completely resolve any reasonable concerns and fears of the Windrush few.

I am advised that the City of Ridgeland, through its Board of Aldermen in a unanimous vote today, has recommended this new plan to you as a new and additional effort to find common ground, compromise and a path out of the quagmire to avoid the costs and delays of litigation.

Friends of Old Agency Road applauds the Mayor and Board of Aldermen of Ridgeland for their further effort and commitment to seek a solution which all reasonable parties can accept. We heartily endorse, support and recommend that the Natchez Trace adopt, select and choose this new Alternative 4 Modified to complete the Parkway.

At the specific request of the City of Ridgeland, the engineers developing his new proposal have been scrupulous in applying your own design standards and requirements, and Alternative 4 Modified does not require any exceptions or variations from your guidelines and parameters.

We sincerely believe that if you choose and select Alternative 4 Modified and the Windrush few do then file suit in opposition, you will then find yourself aligned with and supported by the City of Ridgeland, Friends of Old Agency Road, the Old Agency Road Historical Society and about 99% of the general public.

If you ignore this most reasonable plan, the most significant purpose of which is its revised design intended to more than satisfy fears, however unreasonable and extreme, voiced by the Windrush few, then you will be going against a dedicated, committed and overwhelming majority of Mississippians.

We urge you to select, choose and adopt Alternative 4 Modified in particular, and to avoid any plan or proposal that will close and destroy Old Agency Road.

Sincerely,

R. Hugo Newcomb

R. Hugo Newcomb, Jr., for
Friends Of Old Agency Road

CC: City of Ridgeland,
Senator Trent Lott,
Senator Thad Cochran

BEST COPY AVAILABLE

Postmarked July 13/14, 2000

REALTOR®

JACKSON ASSOCIATION OF REALTORS®, INC.

Post Office Box 1047
Jackson, MS 39215-1047

Telephone
(601) 948-1332

FAX
(601) 355-8707

July 11, 2000

Received
JUL 17 2000
Natchez Trace Parkway

United States Department of the Interior
National Park Service
Natchez Trace Parkway
2680 Natchez Trace Parkway
Tupelo, MS 38801

RE: Natchez Trace Parkway Old Agency Road

Gentlemen:

On behalf of the Jackson Association of REALTORS®, we would urge the National Park Service to reconsider any proposal to close a portion of Old Agency Road in Madison County, Mississippi.

The Jackson Association would urge a compromise in the structure and location of a suitable bridge across Old Agency Road. This simple compromise would accommodate the interests of both the residents of the affected neighborhoods and the National Park Service with a minimum of change and expense. Closing any portion of Old Agency Road would have serious consequences on the citizens of that area, including response time in the event of emergencies.

We urge your support in finding a compromise that would allow Old Agency Road to remain the critical traffic corridor it has become; further we would urge your commitment in identifying a bridge design that would accomplish the extension of the Parkway while affording privacy to the neighborhood affected by this extension.

Sincerely,

Mimi Deck

Mimi Deck,
President

cc: John Jenkins
Cheryl Bullock, Executive Officer

Offices located at 620 North State Street, in the REALTOR® Building

Old Agency Road Historic Preservation Society, Inc.

Received
JUL 17 2000
Natchez Trace Parkway

July 12, 2000

To: National Park Service

From: Sandra S. Vance

On behalf of the Old Agency Road Historic Preservation Society, Inc., I have reviewed the Draft Environmental Impact Statement of the Natchez Trace Parkway, Old Agency Area (Section 3P13), Ridgeland, Mississippi.

Regarding that document, I have the following comments to place on the record:

On page 66, in Alternative 1 and again in Alternative 5, the Park Service concedes that historic circulation would be lost if a portion of Old Agency Road is closed, but its assertion that restoring that portion of the road to Old Trace would mitigate the negative impact on historic circulation is utterly false. Closing the road would have a very adverse effect. It would deprive the state of Mississippi of one of its most precious artifacts.

On pages 105-106 and p. 115, the Park Service states that the bridge would "visually intrude on the historical setting of the road corridor" and "irreversibly intrude on the historical setting of the historic Old Natchez Trace." These statements are completely false. It is not necessary to build the huge bridge that the Park Service is proposing. Instead, a smaller, scenic bridge can be built further west, which would preserve the historical setting. The historical setting will be destroyed if the road is closed; bridging the road will PRESERVE the historical setting.

On pages 110-111, the Park Service states that Alternative 4 would "not be consistent with local plans that call for the relocation of Old Agency Road, and would "not be consistent with Jackson or Ridgeland's long-range transportation plans to relocate Old Agency Road." These statements are utterly false.

Ridgeland's long-range plan calls for leaving Old Agency Road open; not closing it.

On page 115, the Park Service states that closing Old Agency Road would "increase travel time for local drivers from existing conditions," which the Park Service has the audacity to call a "minor negative impact." There is NOTHING minor about the increased driving time and traffic congestion that Alternative 5 will cause. The traffic tangle and delays that Alternative 5 would create in the area would be a major traffic problem, especially for drivers living west of Richardson Road.

On page 116, the Park Service states that it will "work with Ridgeland and the state historic preservation officer to improve safety of Old Agency Road east to Highland Colony Parkway—thus enhancing the safety on this portion of the roadway." If one portion of Old Agency Road is safe enough to be left open, all of it is safe enough to be left open. The Park Service justifies closing a portion of the road by asserting that it is dangerous, but the portion it proposes to leave open—from Richardson Road to Highland Colony Parkway, is just as dangerous. If one portion of the road must be closed for safety, then no portion should be left open. But the Park Service is using safety as an excuse. Old Agency Road can be converted into a scenic drive, and safety will not be an issue.

On page 117, under Alternative 5, the Park Service concedes that if Old Agency Road is closed, "patterns of historic circulation and use along with the character defining attributes of the road would be lost." This is one of the few accurate statements in the entire document. That is why Old Agency Road should not be closed—it would lose its historical authenticity, which is based on its long, uninterrupted history as an in-use road.

On page 124, the Park Service justifies Alterntive 5 by saying the rise in topography would allow for an "approximately at-grade crossing by OAR Relocated over the Parkway and substantially reduce the extent of intrusion on the privacy of adjacent residential subdivisions compared to the bridge proposed under Alternative 4." Again, the Park Service is being disingenuous. A small, scenic bridge located further to the west can be built and it would not intrude on the privacy of any subdivision.

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Appendixes / Selected References / Preparers / Index

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APPENDIX A: NATCHEZ TRACE VEGETATION

Plant Species List 1993

Type / Common Name	Scientific Name
Trees	
Red maple	*Acer rubrum*
Ironwood	*Carpinus caroliniana*
Bitternut hickory	*Carya cordiformis*
Sugarberry	*Celtis laevigata*
Red bud	*Cercis canadensis*
Flowering dogwood	*Cornus florida*
Persimmon	*Diospyros virginiana*
Green ash	*Fraxinus pennsylvanica*
Eastern red cedar	*Juniperus virginiana*
Tulip tree	*Liriodendron tulipifera*
Sweet gum	*Liquidambar styraciflua*
Osage orange	*Maclura pomifera*
Sycamore	*Platanus occidentailis*
Black cherry	*Prunus serotina*
Cherrybark oak	*Quercus falcata* var., *pagodaefolia*
Water oak	*Quercus nigra*
Diamondleaf oak	*Quercus obtusa*
Oak	*Quercus* sp.
Post oak	*Quercus stellata*
Black willow	*Salix nigra*
Chinese tallow tree	*Sapium sebiferum*
Sassafras	*Sassafras albidum*
Winged elm	*Ulmus alata*
American elm	*Ulmus americana*
Shrubs	
Switch cane	*Arundinaria gigantea*
Silverling	*Baccharis halimifolia*
French mulberry	*Callicarpa americana*
Button bush	*Cephalanthus occidentalis*
Parsley hawthorn	*Crataequs marshallii*
Possumhaw/deciducus holly	*Ilex decidua*
Chinese privet	*Liqustrum sinense*
Smooth sumac	*Rhus glabra*
Elderberry	*Sambucus canadensis*
Sebastian-bush	*Sebastiania liqustrina*
Rusty bluehaw	*Viburnum rufibulum*
Vines	
Cross vine	*Anisostichus capreolata*
Rattan vine	*Berchemia scandens*
Trumpet creeper	*Campsis radicans*
Carolina moonseed	*Cocculus carolinus*
Japanese honeysuckle	*Lonicera japonica*
Poison ivy	*Rhus radicans*
Greenbrier	*Smilax rotundifollia*
Catbrier	*Smilax bona-nox*
Climbing-dogbane	*Trachelospermum difforme*
Summer grape	*Vitis aestivallis*
Plants	
Three-seeded mercury	*Acalypha rhomboidea*
False garlic	*Allium bivalve*
Ragweed	*Ambrosia* spp.
Ebony fern sleenwort	*Asplenium platyneuron*
Ebony spleenwort	*Asplenium shizophyllum*
Aster	*Aster* sp.
False nettle	*Boehmeria cylindrica*
Spiny thistle	*Carduus spinosissimus*
Plants (cont.)	
Rattlebox	*Crotalaria spectabilis*
Beggarlice	*Desmodium Paniculatum*
Dichondra	*Dichondra carolinensis*
Elephant's-foot	*Elephantopus carolinianus*
Thoroughwort	*Eupatorium* sp.
Cypress-weed	*Eupatorium capillifolium*
Wild strawberry	*Fragaria virginiana*
Carolina cranesbill	*Geranium carolinianum*
St. Andrew's cross	*Hypericum hypericoides*
Dwarf dandelion	*Krigia dandelion*
Henbit	*Lamium amplexicaule*
Purple henbit	*Lamium purpureum*
Primrose willow	*Ludwigia decurrens*
Floating primrose	*Ludwigia peploides*
Giant goldenrod	*Solidago gigantea*
Sensitive fern	*Onoclea sensibillis*
Wood sorrel	*Oxalis stricta*
Pokeweed	*Phytolacca americana*
Plantain	*Plantago* sp.
Smartweed	*Polygonum punctatum*
Resurrection fern	*Polypodium polypodioides*
Buttercup	*Ranunculus* sp.
Multiflora rose	*Rosa multiflora*
Blackberry	*Rubus* sp.
Dewberry	*Rubus* sp.
Lyre-leaf sage	*Salvia lyrata*
Elderberry	*Sambucus canadensis*
Common chickweed	*Stellaria media*
Common dandelion	*Taraxacum officinale*
White clover	*Trifolium repens*
Brazilian vervain	*Verbena brasiliensis*
Smooth vetch	*Vicia dasycarpa*
Common violet	*Viola floridana*
Grasses, Sedges, and Rushes	
Broom sedge	*Andropogon virginicus*
Frank's sedge	*Carex frankii*
Sedges	*Carex* sp.
Common Bermuda grass	*Cynodon dactycon*
Straw-color flatsedge	*Cyperus strigosus*
Crabgrass	*Digitaria* sp.
Spike-rush	*Eleocharis* sp.
Fescue	*Festuca* sp.
Rush	*Juncus* sp.
Beaked panic grass	*Panicum anceps*
Panic grass	*Panicum* sp.
Scribner panicum	*Panicum scribnerianum*
Switchgrass	*Panicum virgatum*
Bahia grass	*Paspalum notatum*
Annual bluegrass	*Poa annua*
Foxtail	*Setaria geniculata*
Johnson grass	*Sorghum halepense*
Wetland Vegetation	
Water oak	*Quercus nigra*
American elm	*Ulmus americana*
Green ash	*Fraxinus pennsylvanica*
Sweet gum	*Liquidambar styraciflua*
Sugarberry	*Celtis Laevigata*

Type / Common Name	Scientific Name
Wetland Vegetation (cont.)	
Groundsel	*Baccharis halimifolia*
Winged elm	*Ulmus alata*
Poison ivy	*Toxicodendron radicans*
Elderberry	*Sambucus canadensis*
Japanese honeysuckle	*Lonicera Japonica*
Spring cress	*Cardamine bulbosa*
Sedges	*Carex* sp.
Soft rush	*Juncus effusus*
Big bluestem	*Andropogon girardia*
Panic grass	*Panicum* sp.
Buttercup	*Ranuculus* sp.
Seedbox	*Ludwigia alternifolia*
Upland Vegetation: Mixed-Hardwood Forest	
Water oak	*Quercus nigra*
Shumard oak	*Quercus shumardii*
Cherrybark oak	*Quercus falcata* var. *pagodaefolia*
Black cherry	*Prunus serotina*
Flowering dogwood	*Cornus florida*
Blackberry	*Rubus alleghaniensis*
Poison ivy	*Toxicodendron radicans*
Common blue violet	*Viola papilionacea*
Spring beauty	*Claytonia virginica*
Japanese honeysuckle	*Lonicera japonica*
Upland Vegetation: Pine/Oak Forest	
Loblolly pine	*Pinus taeda*
Shumard oak	*Quercus shumardii*
Water oak	*Quercus nigra*
Black cherry	*Prunus serotina*
Possumhaw	Unknown
Japanese honeysuckle	*Lonicera japonica*
Upland Vegetation: Late Successional Fields	
Sweetgum	*Liquidambar styraciflua*
Loblolly pine	*Pinus taeda*
Eastern red cedar	*Juniperus virginiana*
Winged elm	*Ulmus alata*
Blackberry	*Prunus serotina*
Wax myrtle	*Myrica cerifera*
Groundsel tree	*Baccharis halimifolia*
Goldenrod	*Solidago* spp.
Japanese honeysuckle	*Lonicera Japonica*
Little bluestem	Unknown
Upland Vegetation: Agricultural Fields	
False garlic	*Allium bivalve*
Cranesbill	*Geranium* sp.
White clover	*Trifolium repens*
Quaker lady bluets	*Houstonia caerula*
Various grasses	Unknown

Protected Plant Species in Madison County, Mississippi

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
American Chaffseed	*Schwalbea americana*	-	F	Habitat not supported
Pondberry	*Lindera melissifolia*	-	F	Habitat not supported
Price's potato-bean	*Apios priceana*	-	F	Habitat not supported
Prairie milkweed	*Asclepias hirtella*	S	-	Habitat not supported
Eastern purple coneflower	*Echinacea purpurea*	S	-	Habitat not supported
American ginseng	*Panax quinquefolius*	S	-	Habitat not supported
Climbing bittersweet	*Celastrus scandens*	S	-	Habitat not supported
American colombo	*Swertia caroliniensis*	S	-	Habitat not supported
Umbrella magnolia	*Magnolia tripetala*	S	-	Habitat not supported
Scarlet woodbine	*Schisandra glabra*	S	-	Habitat not supported
Turk's cap lily	*Lilium superbum*	S	-	Habitat not supported
Louisiana trillium	*Trillium ludovicianum*	S	-	Habitat not supported
Crested coralroot	*Hexalectris spicata*	S	-	Habitat not supported
Southern maidenhair-fern	*Adiantum capillus-veneris*	S	-	Habitat not supported
Silvery spleenwort	*Athyrium thelypterioides*	S	-	Habitat not supported

Source: Mississippi Natural Heritage Database, May 1999.
F = Federally listed as threatened or endangered.
S = Mississippi State species of special concern.

Plant Species of Special Concern for Mississippi

Common Name	Scientific Name	State Status	Federal Status	Description
Prairie milkweed	*Asclepias hirtella*	S	-	Habitat not supported
Eastern purple coneflower	*Echinacea purpurea*	S	-	Habitat not supported
American ginseng	*Panax quinquefolius*	S	-	Habitat not supported
Climbing bittersweet	*Celastrus scandens*	S	-	Habitat not supported
American colombo	*Swertia caroliniensis*	S	-	Habitat not supported
Umbrella magnolia	*Magnolia tripetala*	S	-	Habitat not supported
Scarlet woodbine	*Schisandra glabra*	S	-	Habitat not supported
Turk's cap lily	*Lilium superbum*	S	-	Habitat not supported
Louisiana trillium	*Trillium ludovicianum*	S	-	Habitat not supported
Crested coralroot	*Hexalectris spicata*	S	-	Habitat not supported
Southern maidenhair-fern	*Adiantum capillus-veneris*	S	-	Habitat not supported
Silvery spleenwort	*Athyrium thelypterioides*	S	-	Habitat not supported

Source: Mississippi National Heritage Program Database May 1999.

S = Mississippi State Species of Special Concern

APPENDIX B: U.S. FISH AND WILDLIFE SERVICE CONSULTATION

United States Department of the Interior

FISH AND WILDLIFE SERVICE
2524 South Frontage Road, Suite B
Vicksburg, Mississippi 39180-5269

IN REPLY REFER TO:

October 22, 1999

Ms. Karen Lusby
BRW
1225 Seventeenth Street, Suite 200
Denver, Colorado 80202

Dear Ms. Lusby:

The U.S. Fish and Wildlife Service (Service) has received your letter dated September 20, 1999, requesting information regarding federally listed species on the Old Agency Road segment of the Natchez Trace Parkway in Madison County, Mississippi. Our comments are submitted in accordance with the Endangered Species Act (16 U.S.C. 1531 et seq.).

The proposed roadway project site was field reviewed by Service personnel in July of this year. We have determined there are no federally listed threatened or endangered species or their habitats in the project area. However, potential impacts to onsite wetlands were identified. We will provide our comments regarding these impacts to the Corps of Engineers and National Park Service during the permit review process.

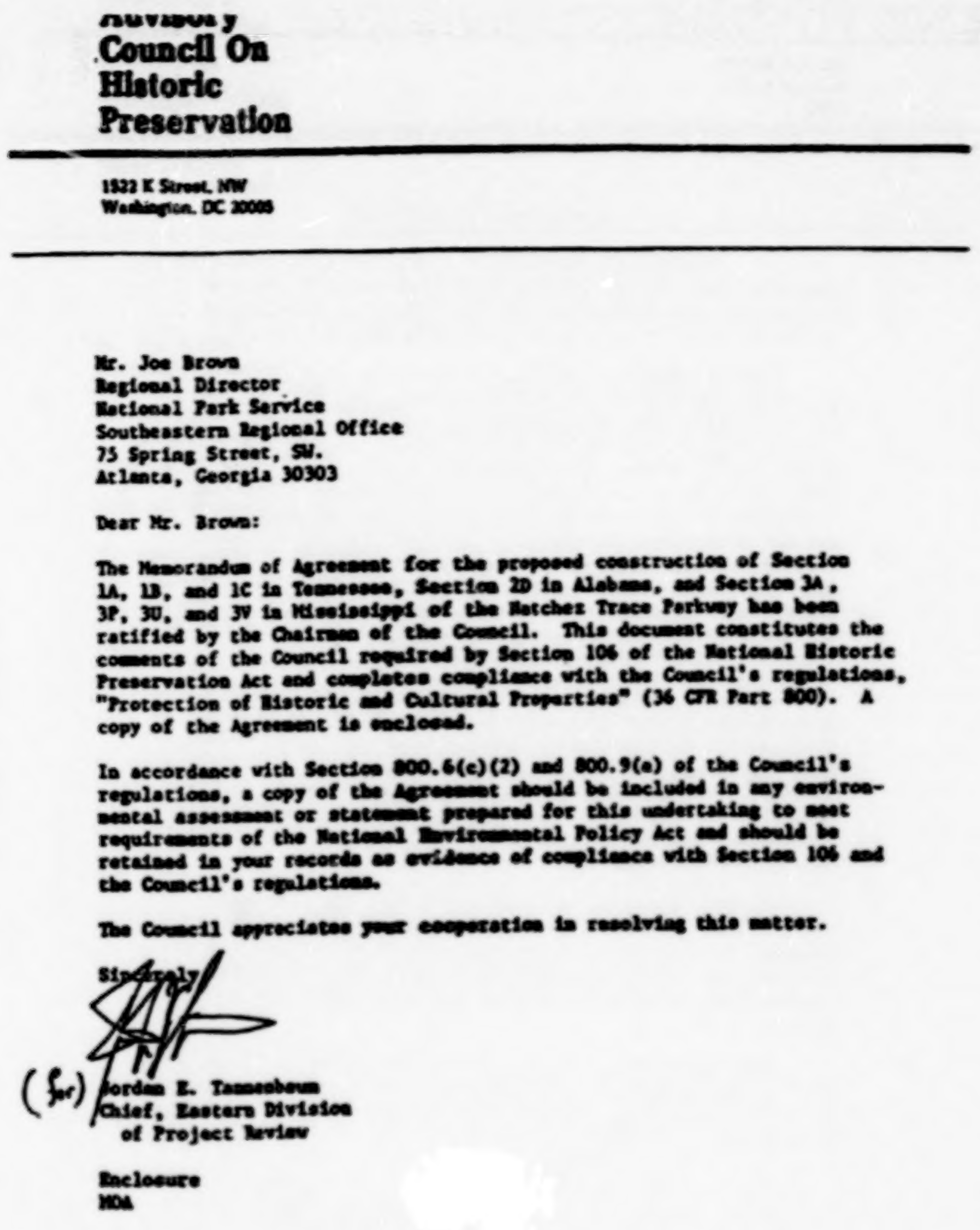
If you have any questions, please contact our office, telephone: (601) 965-4900, ext 132.

Sincerely,

Kathy W. Lunceford

Kathy W. Lunceford
Mississippi Environmental Coordinator

APPENDIX C: CULTURAL RESOURCE CONSULTATION



**Advisory
Council On
Historic
Preservation**

1522 K Street, NW
Washington, DC 20005

Mr. Joe Brown
Regional Director
National Park Service
Southeastern Regional Office
75 Spring Street, SW.
Atlanta, Georgia 30303

Dear Mr. Brown:

The Memorandum of Agreement for the proposed construction of Section 1A, 1B, and 1C in Tennessee, Section 2D in Alabama, and Section 3A, 3P, 3U, and 3V in Mississippi of the Natchez Trace Parkway has been ratified by the Chairman of the Council. This document constitutes the comments of the Council required by Section 106 of the National Historic Preservation Act and completes compliance with the Council's regulations, "Protection of Historic and Cultural Properties" (36 CFR Part 800). A copy of the Agreement is enclosed.

In accordance with Section 800.6(c)(2) and 800.9(a) of the Council's regulations, a copy of the Agreement should be included in any environmental assessment or statement prepared for this undertaking to meet requirements of the National Environmental Policy Act and should be retained in your records as evidence of compliance with Section 106 and the Council's regulations.

The Council appreciates your cooperation in resolving this matter.

Sincerely,

(for) Jordan E. Tannenbaum
Chief, Eastern Division
of Project Review

Enclosure
MOA

Council on
Historic
Preservation

1522 K Street NW
Washington D.C.
20005

MEMORANDUM OF AGREEMENT

WHEREAS, the National Park Service (NPS) proposes to construct Section 1A, 1B, and 1C in Tennessee; Section 2D in Alabama; and Section 3A, 3P, 3U, and 3V in Mississippi of the Natchez Trace Parkway (Parkway); and,

WHEREAS, NPS, in consultation with the Alabama, Mississippi, and Tennessee State Historic Preservation Officers (SHPO), has determined that this undertaking as proposed would have an adverse effect upon the Old Natchez Trace, in Hickman, Lawrence, Lewis, Maury, Wayne, and Williamson Counties, Tennessee, and the John Gordon House in Hickman and Maury Counties, Tennessee, properties included in the National Register of Historic Places and the Rock Creek Archeological District, Colbert County, Alabama, Gordon Mound and Mud Island Creek Complex, Jefferson County, Mississippi, the Old Natchez Trace, Hinds and Madison Counties, Mississippi and the Shelby Bend Archeological District, Hickman County, Tennessee, properties eligible for inclusion in the National Register of Historic Places; and,

WHEREAS, pursuant to Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. Sec. 470f, as amended, 90 Stat. 1320), Section 2(b) of Executive Order 11593, "Protection and Enhancement of the Cultural Environment," and Section 800.4(d) of the regulations of the Advisory Council on Historic Preservation (Council), "Protection of Historic and Cultural Properties" (36 CFR Part 800), NPS has requested the comments of the Council; and,

WHEREAS, pursuant to Section 800.6 of the Council's regulations, representatives of the Council, NPS, and the Alabama, Mississippi, and Tennessee SHPOs have consulted and reviewed the undertaking to consider feasible and prudent alternatives to avoid or satisfactorily mitigate the adverse effect;

NOW, THEREFORE, it is mutually agreed that the undertaking will be implemented in accordance with the following stipulations to satisfactorily mitigate adverse effects on the above-mentioned properties.

Memorandum of Agreement
National Park Service
Shelby Bend Archeological District

Stipulations

SITE-SPECIFIC CONDITIONS

1. Shelby Bend Archeological District and the Gordon House

   Prior to construction in the Duck River vicinity, Tennessee, NPS will carry out the following measures.

   a. NPS in consultation with the Tennessee SHPO, will establish boundaries for the area of potential project impact. Within these established boundaries, further resource identification studies will then be undertaken to include the following:

      (1) archeological testing of sites associated with the Shelby Bend Archeological District, especially HK-19 and HK-20, to define site boundaries, identify depth of sites and assess extent of subsurface remains.

      (2) historic and architectural analysis of structural properties for which determinations of eligiblity have not yet been sought.

      These studies will be done in accordance with 36 CFR Part 66, Appendix B, "Guidelines for the Location and Identification of Historic Properties Containing Scientific, Prehistoric, Historical, or Archeological Data" and Appendix C, "Professional Qualifications" (Attachment 1).

   b. Following completion of these studies, NPS, in consultation with the Tennessee SHPO, will apply the National Register Criteria to identified sites. NPS will submit the documentation on these sites to the Keeper of the National Register for determinations of eligibility in accordance with 36 CFR Part 63 (Attachment 2), as appropriate.

   c. NPS in consultation with the Tennessee SHPO, will then develop a series of alternatives for project completion in the Duck River vicinity. Each alternative will include a full discussion of effects to the identified properties, costs estimates, and anticipated effects to other resources. Alternatives that require crossing the River in the vicinity of the Gordon House will include design elevations of the bridge. NPS will then select a preferred alternative and inform the Tennessee SHPO of its selection and submit documentation on all of the alternatives to the Tennessee SHPO for review and comment. If after review of the preferred alternative, the Tennessee SHPO is of the opinion that its construction will adversely affect properties included in or eligible for inclusion in the National Register, NPS will request the comments of the Council in accordance with Section 800.4(d) of the Council's regulations.

2. Rock Creek Archeological District

Prior to construction of Section 2D, Alabama, NPS, in consultation with the Alabama SHPO, will carry out the following measures:

a. The Parkway in this section will be designed to ensure that between 70% and 80% of the Rock Creek Archeological District is avoided and preserved in-place.

b. For the remaining portion of the Rock Creek Archeological District which will be disturbed by construction, a data recovery plan will be developed and implemented in accordance with the standards outlined in 36 CFR Part 66, "Recovery of Scientific, Prehistoric, Historic and Archeological Data: Methods, Standards, and Reporting Requirements" (Attachment 1). Prior to undertaking the data recovery program, the plan will be provided to the Alabama SHPO and the Council for review. Within 30 calendar days of receipt of the plan, the Alabama SHPO and the Council will provide their comments, if any, to NPS. If, after review of the plan, either the Alabama SHPO or the Council is of the opinion that the plan does not appropriately mitigate adverse effects, NPS will request the Council's comments in accordance with Section 800.6 of the Council's regulations.

3. Mud Island Creek Complex and Gordon Mound

Prior to construction of Section 3U and 3V, Mississippi, NPS will undertake further archeological testing of the Mud Island Creek Complex and Gordon Mound to define boundaries, identify depth of the sites, and assess extent of subsurface remains. This testing will be done in accordance with 36 CFR Part 66, Appendixes B and C (Attachment 1). Based on the results of this additional testing, a data recovery plan will be developed and implemented in accordance with the standards outlined in 36 CFR Part 66, (Attachment 1).

Prior to undertaking the data recovery program, the plan will be provided to the Mississippi SHPO and the Council for review. Within 30 calender days of receipt of the plan, the Mississippi SHPO and the Council will provide their comments, if any, to NPS. If, after review of the plan, either the Mississippi SHPO or the Council is of the opinion that the plan does not appropriately mitigate adverse effects, NPS will request the Council's comments in accordance with Section 800.6 of the Council's regulations.

4. Old Natchez Trace

Brior to commencing construction of any section of the Parkway that may adversely affect portions of the Old Natchez Trace included in or eligible for inclusion in the National Register, NPS will submit the plans for that section of the Parkway to the appropriate SHPO for review and comment. If, after review of the plans, the SHPO is of the opinion that the construction will adversely affect the Old Natchez Trace, NPS will request the comments of the Council in accordance with Section 800.4(d) of the Council's regulations.

GENERAL CONDITIONS

1. NPS will ensure that an archeologist meeting the professional qualifications for supervisory archeologist set forth in 36 CFR Part 66, Appendix C (Attachment 1), will be present during all ground disturbing and clearing activities. In the event that archeological resources are found that may meet the National Register Criteria, construction activities that could affect the resources will be stopped and a determination of eligibility for inclusion in the National Register will be obtained from the Keeper of the National Register. If the resources are determined eligible, NPS will evaluate the feasibility of their preservation in-place. If preservation in-place is determined to be infeasible, a data recovery program will be developed and implemented in accordance with the Council's "Guidelines for Making 'Adverse Effect' and 'No Adverse Effect' Determinations for Archeological Resources in Accordance with 36 CFR Part 800" (Attachment 3).

2. During construction NPS will ensure that those archeological sites to be preserved in-place will not be disturbed by construction activities or construction related activities.

3. Prior to completion of construction of the sections of the Parkway covered by this Agreement NPS, in cooperation with the Alabama, Mississippi, and Tennessee SHPOs will prepare

Memorandum of Agreement
National Park Service
Shelby Bend Archeological District

for submission to the Keeper of the National Register, an Old Natchez Trace Multiple Resource Nomination. The Nomination will collect under one entry resources associated with the Old Trace already included in or determined to be eligible for inclusion in the National Register that are under NPS ownership. It will also include segments of the Old Trace listed in the National Register and contributing archeological, historical, architectural, cultural and engineering features which are resources integral to the Old Trace yet outside the jurisdiction or control of NPS.

4. The terms of this Agreement cover all construction activities associated with the Natchez Trace Parkway, to include parking areas, ancillary roads, borrow pits and staging areas.

5. Compliance with the Council's regulations for future development of NPS facilities ancillary to the Natchez Trace Parkway will be handled in accordance with the terms of the "Programmatic Memorandum of Agreement between the National Park Service and the Council."

6. Failure to carry out the terms of this Agreement requires that NPS again request the Council's comments in accordance with 36 CFR Part 800. If the NPS cannot carry out the terms of the Agreement, it shall not take or sanction any action or make any irreversible commitment that would result in an adverse effect with respect to National Register or eligible properties covered by the Agreement or would foreclose the Council's consideration of modifications or alternatives to the Natchez Trace Parkway that could avoid or mitigate the adverse effect until the commenting process has been completed.

7. If any of the signatories to this Agreement determine that the terms of the Agreement cannot be met or believes a change is necessary, that signatory shall immediately request the consulting parties to consider an amendment or addendum to the Agreement. Such an amendment or addendum shall be executed in the same manner as the original Agreement.

8. Within 90 days after carrying out the terms of the Agreement, NPS shall provide a written report to all signatories to the Agreement on the actions taken to fulfill the terms of the Agreement.

12/11/79
(date)
Deputy Executive Director
Advisory Council on Historic Preservation

Memorandum of Agreement
National Park Service
Shelby Bend Archeological District

Neal G Guse (date) 1/10/80
National Park Service

Milo B. Howard Jr. (date) 2/22/80
Alabama State Historic Preservation
Officer

Elbert R. Hilliard (date) 4-14-80
Mississippi State Historic Preservation
Officer

Herbert L. Harper (date) 1/30/80
Tennessee State Historic Preservation
Officer

Richard H. Jenrette (date) July 1, 1980
Chairman
Advisory Council on Historic Preservation

Mississippi Department of Archives and History

Post Office Box 571 • Jackson, Mississippi 39205-0571 • Telephone 601-359-6850
Elbert R. Hilliard, Director

April 29, 1994

Mr. Paul B. Hartwig
Deputy Associate Regional Director
Cultural Resources
Southeast Regional Office
National Park Service
United States Department of the Interior
75 Spring Street
Atlanta, Georgia 30303

Dear Mr. Hartwig:

Thank you for your letter of April 5, 1994, concerning the Section 106 review for the proposed construction of Section 3P of the Natchez Trace Parkway in Madison County, Mississippi. In reviewing your letter, we have noted that the draft Memorandum of Agreement (MOA) that you have submitted for our comment addresses Old Agency Road but does not mention the other two National Register eligible properties in the area of potential effect, namely the Choctaw Agency Site and Greenwood Plantation.

We have also noted that the first mitigating measure listed under Stipulation 1 of the MOA provides that, prior to commencing construction on the Old Agency Road portion of the Natchez Trace Parkway, the National Park Service, in cooperation with this Department, would prepare for submission to the Keeper of the National Register of Historic Places a nomination for what is described in the MOA as "this section of the Old Natchez Trace."

We would respectfully submit that the first action that should be taken would be for the National Park Service to request a formal determination of eligibility for Old Agency Road under the provisions of 36 CFR 800.4 (c)(4). In our opinion, this request for the determination of eligibility should also seek from the Keeper of the National Register a determination in regard to the principal area of historical significance for Old Agency Road. As you know, it has been our position that Old Agency Road has had a continuing history through its original use as the Natchez Trace, its

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Mr. Paul B. Hartwig
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April 29, 1994

late 19th and early 20th century use as a rural plantation/farm road, and its current contribution as a scenic road in an urban area. The National Park Service, on the other hand, has consistently held that the primary significance of Old Agency Road rests in its having served as the original Natchez Trace.

For the record, we would like to take this opportunity to reiterate the previous attempts of the Department of Archives and History to formally nominate Old Agency Road to the National Register of Historic Places:

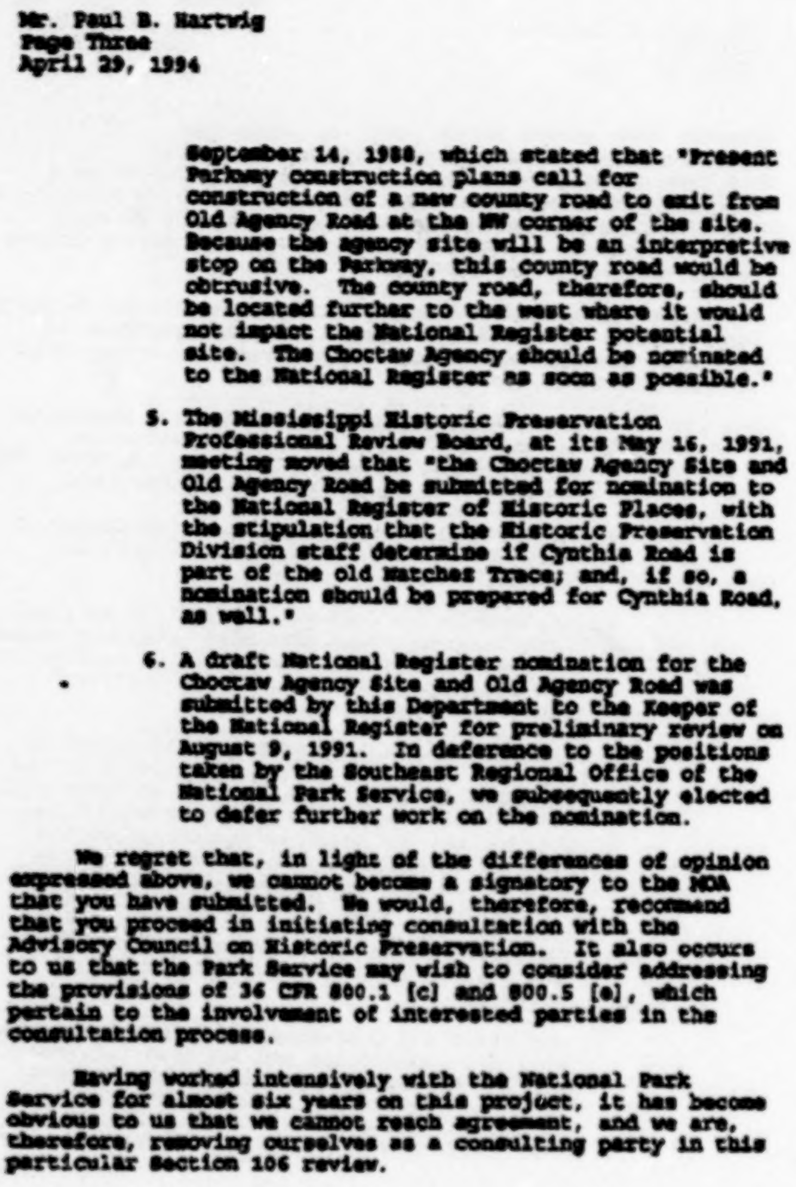
1. The Old Agency Road nomination was presented to the Mississippi Historic Preservation Professional Review Board on May 10, 1988, and was approved for nomination at that time.

2. The nomination was returned by the Keeper of the National Register in June of 1988 for further research.

3. The nomination was revised, and the National Park Service, along with other property owners in the area, was notified that the nomination was being resubmitted to the Review Board for its consideration.

4. The National Park Service, in its letter of May 14, 1991, stated that it objected to the nomination, noting that, "While we agree with the eligibility of Old Choctaw Agency Site, further investigation is needed before the site is nominated. Once the extent of the site is documented, we will nominate it to the National Register in consultation with your office. Old Agency Road is already on the National Register, and we disagree with the need to enhance its documentation at this time."

   Our staff has contacted the National Register Office in Washington and has been informed that the Old Agency Road portion of the Natchez Trace has never been listed on the National Register. We have also reviewed the National Park Service preliminary report dated



Mr. Paul B. Hartwig
Page Three
April 29, 1994

September 14, 1988, which stated that "Present Parkway construction plans call for construction of a new county road to exit from Old Agency Road at the NW corner of the site. Because the agency site will be an interpretive stop on the Parkway, this county road would be obtrusive. The county road, therefore, should be located further to the west where it would not impact the National Register potential site. The Choctaw Agency should be nominated to the National Register as soon as possible."

5. The Mississippi Historic Preservation Professional Review Board, at its May 16, 1991, meeting moved that "the Choctaw Agency Site and Old Agency Road be submitted for nomination to the National Register of Historic Places, with the stipulation that the Historic Preservation Division staff determine if Cynthia Road is part of the old Natchez Trace; and, if so, a nomination should be prepared for Cynthia Road, as well."

6. A draft National Register nomination for the Choctaw Agency Site and Old Agency Road was submitted by this Department to the Keeper of the National Register for preliminary review on August 9, 1991. In deference to the positions taken by the Southeast Regional Office of the National Park Service, we subsequently elected to defer further work on the nomination.

We regret that, in light of the differences of opinion expressed above, we cannot become a signatory to the MOA that you have submitted. We would, therefore, recommend that you proceed in initiating consultation with the Advisory Council on Historic Preservation. It also occurs to us that the Park Service may wish to consider addressing the provisions of 36 CFR 800.1 [c] and 800.5 [e], which pertain to the involvement of interested parties in the consultation process.

Having worked intensively with the National Park Service for almost six years on this project, it has become obvious to us that we cannot reach agreement, and we are, therefore, removing ourselves as a consulting party in this particular Section 106 review.

Mr. Paul B. Hartwig
Page Four
April 29, 1994

We are also of the opinion that the National Park Service needs to outline the steps that it plans to take to address the project's adverse effect on Greenwood Plantation, which we believe is eligible for the National Register.

We recognize that in this particular situation involving the construction of Section 3P of the Natchez Trace Parkway there is no ideal solution. Whatever is done in the area will have a significant effect.

With every good wish, I am

Sincerely,

Elbert R. Hilliard
State Historic Preservation Officer

ERH:cs
C: Clearinghouse for Federal Programs
Mr. Don Klima
Mr. Dan Brown

H4217(SER-OCR)

Mr. Robert D. Bush
Executive Director
Advisory Council on Historic Preservation
1100 Pennsylvania Avenue, N.W.
Suite 809
Washington, D.C. 20005

Dear Mr. Bush:

The National Park Service (NPS) is proposing to construct a portion of section 3-P of the Natchez Trace Parkway in Madison County, Mississippi. Under the terms of a 1980 Memorandum of Agreement (MOA), we have been in consultation with the Mississippi State Historic Preservation Officer (SHPO) regarding the potential adverse effect of the project on a portion of the historic property known as the Old Natchez Trace, currently also serving as the alignment of Old Agency Road. This consultation has been ongoing since 1988. Our determination was that the project would have an adverse.effect on a portion of the segment of Old Natchez Trace. The SHPO has not commented on the potential effects on the Old Natchez Trace but instead asserts that the short section of Old Agency Road which would be closed in conjunction with the project would be an adverse effect. The NPS does not concur with the latter. Despite numerous attempts to resolve our differences with the SHPO, these efforts have been unsuccessful. As a result, the SHPO has removed his office from the Section 106 consultation process as is evident from the attached letter dated April 29, 1994. Therefore, at this time we would like to initiate Section 106 consultation with the Advisory Council as provided for in 36 CFR 800.1(c)(1)(ii).

As background, the NPS has been discussing completion of the Natchez Trace Parkway near Jackson, Mississippi, with the SHPO for at least six years. A three mile segment of the Old Natchez Trace, now paved, serves as the alignment of Old Agency Road running parallel to and crossing Parkway lands in this project area. This segment of Old Natchez Trace is eligible for listing on the National Register of Historic Places, a point on which the NPS and the SHPO are in agreement. However, the NPS takes the position that the primary basis for the eligibility of the affected segment of Old Natchez Trace is its 1790 to 1820 period of principle historic use in context with the then extant Natchez, Mississippi to Nashville, Tennessee overland route. The succeeding adaptation of this portion of the Old Natchez Trace into the current Old Agency Road, while encompassing historic usage, constitutes a subordinate, secondary historic basis for potential eligibility. The setting for the extended duration of more recent use of this alignment of the Old Natchez Trace has been dynamic since the turn of the century. Change has been a significant factor surrounding Old Agency Road, most notably the reduction in open agrarian landscape. In response first to declining agricultural land use, succeeded by purchase of lands for the Natchez Trace Parkway by the State of Mississippi, and subsequent transfer to the NPS, fallow field succession has been responsible for the often noteworthy wooded setting of this portion of Old Agency Road. This recent land use change clearly calls into question the integrity of the setting associated with the period of Old Agency Road's use.

NPS plans for construction of the Parkway call for crossing the affected segment of Old Natchez Trace at grade, restoration of the Old Trace section resulting from the closure of Old Agency Road in accordance with the 1978 Environmental Impact Statement (EIS), and construction of a new public road to provide continued deed reserved access between properties accessing Old Agency Road and the local public road system. The SHPO, though, prefers an option that keeps Old Agency Road open, through the use of a bridge over Old Agency Road.

In an attempt to work with the SHPO on finding an acceptable solution, the NPS has devoted extensive time and energy in developing and evaluating various alternatives, conducting many private and public meetings with numerous local residents and government officials who have an interest in the matter. As a consequence of this process the NPS has determined that the planned crossing of the Old Natchez Trace and Old Agency Road at grade has the least adverse impact on cultural resources potentially affected by the proposed project and simultaneously provides opportunities for substantive mitigation. Specifically, although other alternatives, such as bridging Old Agency Road over the Parkway motor road, albeit more costly, are feasible on an engineering basis, their impacts to cultural resources are more significant and therefore unacceptable. In addition, these alternatives also would have conveyed increased or clearly unacceptable impacts to other Parkway resources and the environment affecting adjacent residential neighborhoods.

Despite the basis for the NPS's decision on the best treatment of the cultural and other resources affected, there has been local reaction from the public, both negative and positive, to the idea of closing Old Agency Road and the SHPO has made it clear that he can not approve of such a plan. Because of the SHPO's position, and because the NPS continues to believe after a painstakingly thorough decision process that the plan to cross at grade has the least combined impact on the affected resources, we now find ourselves with no other option than to seek an agreement directly with the Advisory Council for the completion of the Section 106 compliance process. This, as you may remember, was a possibility we mentioned in our letter to you of January 10, 1994.

In December 1993, Martha Catlin, of your staff, attended a meeting in Jackson, Mississippi, with the SHPO and NPS staff and was briefed on the Old Agency Road component of this situation and the issues involved. We also provided her with some background documentation at that time. We hope that Martha's participation in that meeting will now be helpful as we begin our consultation with the Advisory Council. Enclosed with this letter is additional documentation as required by 36 CFR 800.8(b)(1-4). It includes a description of the undertaking; a description of the efforts to identify historic properties, a description of the affected historic properties, and a description of the undertaking's effects on historic properties. We have also compiled a record of the extensive public involvement that has been a part of the planning process for the past six years as part of the NPS's phased compliance concerning this eligible property. In addition, we have prepared a draft Memorandum of Agreement (MOA) to be concluded between the NPS and the Advisory Council to stipulate the appropriate mitigation measures for this project. If there is any other information that you require, please call Mike Capps at 404-730-2311.

The NPS has a legislative mandate to complete construction of the Natchez Trace Parkway; this project is the last segment to be built with the exception of the termini at either end. It is very important that we proceed with the fulfillment of our mandate. We also want to do so in a manner that affords the most protection to the cultural resources in our care. We look forward to working with you in successfully concluding the Section 106 compliance process for this project and proceeding with the actual construction.

Sincerely,

Paul B Hartwig

Paul B. Hartwig
Deputy Associate Regional Director
Cultural Resources

Enclosures

cc: Mississippi State Historic Preservation

bcc: Supt., NATR

MhCapps:mc:6/29/94

APPENDIX D: AVERAGE DAILY TRAFFIC METHODOLOGY FOR NOISE AND AIR ANALYSES

Average daily traffic (ADT) forecasts were developed for existing conditions (1997), buildout (2003), and future conditions (2020), based on existing and projected traffic counts done in other reports for the site. ADT volumes were generated for these three time periods for each of the five alternatives evaluated (table D-1). While the ADT counts were used to analyze the traffic impacts, the noise analysis requires peak-hour volumes. Since actual peak-hour counts were not available, the volumes were calculated. Using a typical peak-hour distribution for urban areas, the peak-hour traffic volumes were calculated as 10% of the ADT count (table D-2).

To evaluate the worse case volume scenario for noise impacts, the traffic volumes must be at level of service (LOS) C. Using the procedures for a two-lane roadway outlined in the Highway Capacity manual, (3rd ed.), the level of service was calculated using the estimated peak-hour volumes. The resulting level of services are shown in table D-3. The table shows that the peak-hour volumes on a number of road segments provided a level of service better or worse than C in many cases.

For a given set of road conditions, there is a range of peak-hour volumes that will provide LOS C. To conduct the noise analysis, the actual peak-hour volumes were adjusted to the maximum or minimum value within this LOS C range, depending on whether the actual value was above or below the range. The adjusted peak-hour volumes used in the noise analysis are provided in table D-4.

TABLE D-1: SUMMARY OF ESTIMATED AVERAGE DAILY TRAFFIC ON OLD AGENCY ROAD

	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Existing Volumes (1997)					
Existing	1,100	3,000	10,000	0	0
Revised Proposed Action	1,100	0	7,000	3,000	3,000
Alternative 1	1,100	0	10,000*	3,000	0
Alternative 2	1,100	0	7,000	3,000	3,000
Alternative 3	1,100	0	0	3,000	10,000
Alternative 4	1,100	1,000	8,000	2,000	2,000
Alternative 5	1,100	0	10,000	3,000	0
Projected 2003 Volumes (2% increase projected on all roads, based on typical rate of increase for urban areas)					
Existing Trend	1,240	3,380	11,250	0	0
Revised Proposed Action	1,240	0	7,880	3,380	3,380
Alternative 1	1,240	0	7,880	3,380	0
Alternative 2	1,240	0	7,880	3,380	3,380
Alternative 3	1,240	0	0	3,380	11,250
Alternative 4	1,240	1,130	9,000	2,250	2,250
Alternative 5	1,240	0	11,250	3,380	0
Projected 2020 Volumes (based on 2020 volumes predicted on Old Agency and 2% subdivision growth)					
Existing Trend**	7,000	11,000	21,000	0	0
Revised Proposed Action	7,000	0	10,000	11,000	11,000
Alternative 1	7,000	0	21,000	11,000	0
Alternative 2	7,000	0	10,000	11,000	11,000
Alternative 3	7,000	0	0	11,000	21,000
Alternative 4	7,000	4,500	14,500	6,500	6,500
Alternative 5	7,000	0	21,000	11,000	0

* 7,000 between Richardson Road and new intersection, 10,000 between intersection and Highland Colony Parkway.

** Forecast 2020 estimates based on *Transportation Plan Update* (Ridgeland, MS 1996); 2020 predicted volumes used on Old Agency Road combined with 2% increase on subordinate roads.

TABLE D-2: PEAK-HOUR TRAFFIC ON OLD AGENCY ROAD

	(Old Agency Road (East of Whippoorwill Lane)	Old Agency Road (Dinsmor — Richardson Road)	Old Agency Road (Richardson Road — Highland Colony Parkway)	Old Agency Road Relocated (Dinsmor — Richardson Road)	Old Agency Road Relocated (Richardson Road — Highland Colony Parkway)
Projected 2003 Volumes (2% increase on all roads, based on typical rate of increase for urban areas)					
Existing Trend	124	338	1,125	0	0
Revised Proposed Action	124	0	788	338	338
Alternative 1	124	0	788	338	0
Alternative 2	124	0	788	338	338
Alternative 3	124	0	0	338	1,125
Alternative 4	124	113	900	225	225
Alternative 5	124	0	1,125	338	0
Projected 2020 Volumes (based on 2020 volumes predicted on Old Agency, 2% subdivision growth)					
Existing Trend*	700	1,100	2,100	0	0
Revised Proposed Action	700	0	1,000	1,100	1,100
Alternative 1	700	0	2,100	1,100	0
Alternative 2	700	0	1,000	1,100	1,100
Alternative 3	700	0	0	1,100	2,100
Alternative 4	700	450	1,450	650	650
Alternative 5	700	0	2,100	1,100	0

* Forecast 2020 estimates based on *Transportation Plan Update* (Ridgeland, MS 1996); 2020 predicted volumes used on Old Agency Road combined with 2% increase on subordinate roads.

TABLE D-3: PEAK-HOUR VOLUMES — ACTUAL LEVEL OF SERVICE

	(Old Agency Road (East of Whippoorwill Lane)		Old Agency Road (Dinsmor — Richardson Road)		Old Agency Road (Richardson Road — Highland Colony Parkway)		Old Agency Road Relocated (Dinsmor — Richardson Road)		Old Agency Road Relocated (Richardson Road — Highland Colony Parkway)	
Projected 2003 Volumes — 2% increase on all roads (based on typical rate of increase for urban areas)										
Existing Trend	124	B	338	C	1,125	E	0		0	
Revised Proposed Action	124	B	0		788	D	338	C	338	C
Alternative 1	124	B	0		1,125	E	338	C	0	
Alternative 2	124	B	0		788	D	338	C	338	C
Alternative 3	124	B	0		0		338	C	1,125	E
Alternative 4	124	B	113	B	900	D	225	B	225	B
Alternative 5	124	B	0		1,125	E	338	C	0	
Projected 2020 Volumes — Estimated based on 2020 volumes predicted on Old Agency Road, 2% subdivision growth										
Existing Trend	700	D	1,100	E	2,100	E	0		0	
Revised Proposed Action	700	D	0		1,000	E	1,100	E	1,100	E
Alternative 1	700	D	0		2,100	E	1,100	E	0	
Alternative 2	700	D	0		1,000	E	1,100	E	1,100	E
Alternative 3	700	D	0		0		1,100	E	2,100	E
Alternative 4	700	D	450	C	1,450	E	650	C	650	D
Alternative 5	700	D	0		2,100	E	1,100	E	0	

TABLE D-4: ADJUSTED PEAK-HOUR VOLUMES TO ACHIEVE LOS C

	Old Agency Road (East of Whippoorwill Lane)		Old Agency Road (Dinsmor — Richardson Road)		Old Agency Road (Richardson Road — Highland Colony Parkway)		Old Agency Road Relocated (Dinsmor — Richardson Road)		Old Agency Road Relocated (Richardson Road — Highland Colony Parkway)	
Projected 2003 Volumes — 2% increase on all roads (based on typical rate of increase for urban areas)										
Existing	*275*	*C*	338	C	*550*	*C*	0		0	
Revised Proposed Action	*275*	*C*	0		*550*	*C*	338	C	338	C
Alternative 1	*275*	*C*	0		*550*	*C*	338	C	0	
Alternative 2	*275*	*C*	0		*550*	*C*	338	C	338	C
Alternative 3	*275*	*C*	0		0		338	C	*550*	C
Alternative 4	*275*	*C*	*275*	C	*550*	*C*	*390*	C	*275*	C
Alternative 5	*275*	*C*	0		*550*	*C*	338	C	0	
Projected 2020 Volumes — Estimated based on 2020 volumes predicted on Old Agency, 2% subdivision growth										
Existing Trend	*550*	*C*	*550*	C	*550*	*C*	0		0	
Revised Proposed Action	*550*	*C*	0		*550*	*C*	*775*	C	*775*	C
Alternative 1	*550*	*C*	0		*550*	*C*	*775*	C	0	
Alternative 2	*550*	*C*	0		*550*	*C*	*775*	C	*775*	C
Alternative 3	*550*	*C*	0		0		*775*	C	*775*	C
Alternative 4	*550*	*C*	450	C	*550*	*C*	*650*	C	*650*	C
Alternative 5	*550*	*C*	0		*550*	*C*	*775*	C	0	

Note italics indicate the volume was adjusted to achieve LOS C. Maximum volume for LOS used.

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APPENDIX E: STATEMENT OF FINDINGS FOR EXECUTIVE ORDER 11990 ("PROTECTION OF WETLANDS")

NATCHEZ TRACE PARKWAY

PROJECT NPS-NATR 3P13

OLD AGENCY ROAD

INTRODUCTION

The National Park Service (NPS) is proposing to complete a 1.8-kilometer (1.1-mile) section of the Natchez Trace Parkway within the city of Ridgeland, Mississippi. This wetland Statement of Findings (SOF) focuses on that section, known as project 3P13, which extends from Highland Colony Parkway to just east of Whippoorwill Lane. This section, as shown in the Vicinity map on page 3 of this document, is part of a larger section of unfinished parkway in Mississippi that extends from I-20 in Hinds County to I-55 in Madison County.

The Natchez Trace Parkway was established in 1938 to commemorate the Old Natchez Trace, a primitive network of trails stretching from Natchez, Mississippi, to Nashville, Tennessee. The parkway was designed to follow the alignment of the historic trace as closely as possible, and when finished it will extend diagonally approximately 716 kilometers (444 miles) from Natchez to Nashville. The Natchez Trace Parkway today preserves the history associated with one of the country's earliest trails and provides scenic, cultural, natural, and recreational opportunities to 13 million visitors annually.

Planning for parkway construction between I-20 and I-55 through portions of Hinds and Madison Counties, Mississippi, has been ongoing for several decades. In 1978 the *Natchez Trace Parkway / Final Environmental Impact Statement* was completed and outlined an alignment for this segment. The *Draft Supplemental Environmental Impact Statement* for Old Agency Road and the Natchez Trace Parkway was completed in April 2000 as a result of subsequent controversy concerning the parkway design and changes to existing roadways. The National Park Service considered five alternatives for project 3P13 in the *Draft Supplemental Environmental Impact Statement;* alternative 5 was identified as the proposed action. After review of public comments, a sixth alternative — the revised proposed action — was developed and selected as the preferred alternative and is being evaluated in the *Final Supplemental Environmental Impact Statement.*

The construction of new roads within the 3P13 project will impact approximately 0.69 ha (1.71 ac) of wetlands within the project limits of the revised proposed action. Impacts to five wetland areas will be unavoidable.

The purpose of this statement of findings is to present the rationale for selecting the revised proposed action, which would develop the parkway through areas of wetlands, and to present a mitigation plan to compensate for the loss.

This statement of findings has been prepared in accordance with the guidelines of NPS Director's Order # 77-1: *Wetland Protection,* which establishes NPS policies, requirements, and standards for implementing Executive Order 11990 *Protection of Wetlands* (42 Fed. Reg. 26961). The objective of this executive order is to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy, modification, or destruction of wetlands.

ALTERNATIVES CONSIDERED

The *Draft Supplemental Environmental Impact Statement* documented five alternatives and their associated environmental impacts to complete this portion of the parkway. The alignment of the parkway is similar under all the alternatives; however, each alternative considers different options for Old Agency Road, the accommodation of future east/west local traffic, and access to adjacent residential neighborhoods. The revised proposed action resulted from comments provided during public review of the draft document and is being evaluated in the *Final Supplemental Environmental Impact Statement* as the preferred alternative. The revised proposed action is the focus of this "Statement of Findings" (see the Revised Proposed Action plan, page 14).

The **revised proposed action** would involve roadway changes incorporating elements similar to those in previous alternatives, in that Old Agency Road Relocated would be constructed between Whippoorwill Lane and Highland Colony Parkway. A new road would be constructed connecting Old Agency Road to Old Agency Road Relocated. The parkway motor road would have a horizontal alignment identical to alternatives 1 through 5 (see descriptions below).

Under this alternative the parkway motor road would cross a closed section of Old Agency Road approximately at-grade, with Old Agency Road closed to vehicular traffic and restored to "Old Trace" appearances between Whippoorwill Lane and Richardson Road. The new crossover road connecting Old Agency Road with Old Agency Road Relocated would begin approximately across from the St. Andrew's School ballfield parking lot entrance and would bridge over the parkway motor road.

At this crossing the parkway motor road would be placed in an approximately 1 meter (3 ft.) foot deep cut section, allowing a bridge to cross over the parkway motor road close to existing grade. Access to the Choctaw Agency site would be provided directly from the parkway motor road, which would include a parking area for visitors. Old Agency Road Relocated would be constructed south of the parkway motor road between Whippoorwill Lane and Highland Colony Parkway to provide access and circulation for local through traffic from adjacent residential areas. A new intersection would be provided at Highland Colony Parkway.

Access to I-55 would be provided via Old Agency Road and Old Agency Road Relocated. Entrances to Dinsmor subdivision and Greenwood Plantation from Old Agency Road Relocated would be provided. Brame Road would directly intersect with Old Agency Road Relocated at its current location.

Approximately 1.10 kilometers (0.68 miles) of existing roadway from Old Agency Road, Brame Road, and the entrance to the Dinsmor subdivision would be removed and revegetated within the NPS right-of-way. The closed portion of Old Agency Road would be restored to "Old Trace" appearances, e.g., removal of asphalt road surface, graded to drain, planted with turf grasses, and kept mowed. It would be interpreted for the public by placement of a standard "Old Trace" identification marker adjacent to the parkway motor road.

Alternative 1 is the alternative that was originally proposed in the 1978 *Final Environmental Impact Statement*. It was included in the *Draft Supplemental Environmental Impact Statement* as the no-action alternative to provide a baseline for comparing the other alternatives. This alternative would impact approximately 0.6 ha (1.5 ac) of wetlands.

Alternative 2 would cross a closed section of Old Agency Road approximately at-grade, the same as alternative 1. The motor road would closely follow the contour of existing ground except where it connected to the bridge over Highland Colony Parkway. Vehicles traveling on the parkway would enter and exit at I-55. Access to the Choctaw Agency site would be provided directly from the parkway motor road, and a parking area would be provided for visitors. This alternative would impact approximately 0.7 ha (1.7 ac) of wetlands.

Alternative 3 would cross the Old Natchez Trace approximately at-grade and closely follow the contour of existing ground except where it would be elevated to bridge over an extension of Richardson Road. The parkway motor road would connect to the bridge over Highland Colony Parkway. Vehicles traveling on the parkway would enter and exit at I-55. Like alternative 2, access to the Choctaw Agency site would be provided directly from the parkway motor road, and a parking area would be provided for visitors. This alternative would impact approximately 0.7 ha (1.7 ac) of wetlands.

Alternative 4 would keep Old Agency Road open. The parkway motor road would follow the natural contours except it would be elevated where it bridged over Old Agency Road. The parkway motor road would connect to the bridge over Highland Colony Parkway. Vehicle access to the parkway would be via I-55. Like alternatives 2 and 3, access to the Choctaw Agency site would be provided directly from the parkway motor road, and a parking area would be provided for visitors. This alternative would impact approximately 0.7 ha (1.7 ac) of wetlands.

Alternative 5 (the previous proposed action) would cross Old Agency Road at-grade, and a portion of Old Agency Road would be closed and restored to Old Trace appearances between Whippoorwill Lane and Richardson Road. To facilitate east/west local traffic movements, a relocated Old Agency Road would be constructed along the southern edge of the parkway right-of-way between Whippoorwill Lane and midway between Richardson Road and Brame Road. Old Agency Road Relocated would cross over the parkway motor road east of Richardson Road. At this crossing the parkway motor road would cut through a rise in topography, allowing a bridge to cross over the parkway motor road at the existing ground elevation. This alternative would impact approximately 0.5 ha (1.4 ac) of wetlands.

WETLANDS WITHIN THE PROJECT AREA

Surveys for wetlands in the project area were performed in March 1999. The wetland survey information included soils, vegetation, and hydrology. Previously published information was also reviewed to determine the approximate extent of wetlands on and adjacent to the project area. The secondary source data included the US Fish and Wildlife Service National Wetland Inventory maps, Madison County Soil maps, preliminary design plans prepared by the Federal Highway Authority, and Biological Surveys for Section 3P Natchez Trace Parkway.

Wetlands identified in the project area exhibited the characteristics of jurisdictional wetlands as defined under section 404 of the Clean Water Act and the ecological conditions that correspond to the wetland classification system in the Cowardin classification of wetlands and deepwater habitat (USFWS 1979).

The outermost boundary of each wetland within the project area was demarcated with orange flagging and numbered consecutively. Fourteen wetland/upland boundary lines were established. For purposes of mapping wetland locations and calculating impacts in both the *Draft* and *Final Supplemental Environmental Impact Statements*, wetlands were numbered 1 through 10 (see the Wetlands map, page 53).

A total of eight (8) wetland types were identified in the project area including:

PFO1B — Palustrine Forested Broad-Leaved Deciduous Saturated

PFO1C — Palustrine Forested Broad-Leaved Deciduous Seasonally flooded

PSS1B — Palustrine Scrub/Shrub Broad-Leaved Deciduous Saturated

PEM1B — Palustrine Emergent Persistent Saturated

POWH — Palustrine Open Water (AKA unconsolidated bottom) Permanent

R2UB1 — Riverine Lower Perennial Unconsolidated Bottom

R3UB1 — Riverine Upper Perennial Unconsolidated Bottom

R4SB3 — Riverine Intermittent Stream Bed

A total of 4.25 hectares (10.5 ac) of wetlands were surveyed in ten (10) different wetland areas within the project area.

Wetland 1 is a palustrine forested saturated wetland just east of Whippoorwill Lane in the southern portion of the project area. This wetland type contains a canopy dominated by mature water oak (*Quercus nigra*), American elm (*Ulmus americana*), green ash (*Fraxinus pennsylvanica*), and sweet gum (*Liquidambar styraciflua*). Sugarberry (*Celtis laevigata*), elderberry (*Sambucus canadensis*), winged elm (*Ulmus alata*), and poison ivy (*Toxixondendron radicans*) are present in the understory. The groundcover is dominated by Japanese honeysuckle (*Lonicera japonica*), spring cress (*Cardamine bulbosa*), and sedges (*Carex* sp.). The total land area of this wetland is approximately 0.67 hectare (1.65 ac.). Approximately 80% of this acreage is within the project area; the remaining 20% extends beyond the area to the west.

Wetland 2 is adjacent to wetland 1. It consists of a palustrine open water permanently flooded pond with a palustrine scrub/shrub saturated wetland fringe. Dominant scrub/shrub vegetation includes sweetgum saplings, winged elm, Japanese honeysuckle, and groundsel tree (*Baccharis halimifolia*). The open water pond is 0.042 hectare (0.10 acre), and the scrub vegetation covers 0.11 hectare (0.28 ac.). The total area of wetland 2 is estimated at 0.15 hectare (0.38 ac.).

Wetland 3 is another palustrine scrub/shrub saturated wetland north of Old Agency Road in the vicinity of the Windrush subdivision. This wetland has similar characteristics and vegetation to wetland 2. This wetland is roughly 0.07 hectare (0.18 ac.).

Wetland 4 is a palustrine forested saturated wetland adjacent to wetland 3 in a north/south orientation across the project area perpendicular to the proposed alignment. The canopy is dominated by water oak, American elm, green ash, and sweet gum. This wetland covers 0.30 hectare (0.73 ac.).

Wetland 5 consists of a series of riverine lower perennial unconsolidated bottom, and riverine intermittent streambed ditches along the north and south sides of Old Agency Road between wetland 3 and Richardson Road. These are open water corridors with little or no vegetation. This wetland occupies roughly 0.29 hectare (0.73 ac.).

Wetland 6 is a palustrine forested saturated/seasonally flooded wetland with a wide palustrine scrub/shrub saturated wetland fringe. It is connected to wetland 4 at the southern boundary of the project area. The two areas combined form a U-shape beginning near the entrance to the Dinsmor subdivision along Old Agency Road, extending south to the project boundary, and north again to Old Agency Road west of Richardson Road. The land area of wetland 6 is 0.85 hectare (2.10 ac.).

Wetland 7 is a palustrine forested saturated wetland in the southwest corner of Richardson Road and Old Agency Road. The tree canopy is dominated by water oak, American elm, green ash, and sweet gum. This wetland covers 0.14 hectare (0.35 ac.).

Wetland 8 is a long, linear palustrine-forested saturated/seasonally flooded and riverine intermittent streambed wetland that extends from the center of the study area near Greenwood Plantation Drive to the southwest corner of Brame Road. The forested area is 0.4 hectare (0.98 ac.) and the riverine area is 0.02 hectare (0.05 ac.). The total coverage of this wetland area is 0.42 hectare (1.03 ac.).

Wetland 9 is a linear wetland system comprised of palustrine forested saturated wetlands, palustrine open water permanently flooded ponds, palustrine scrub/shrub saturated wetlands, and palustrine emergent saturated wetlands. The emergent wetlands include vegetation such as soft rush (*Juncus effusus*), sedges (*Carex* spp.), seedbox (*Ludwigia alternifolia*), panic grass (*Panicum* sp.) and buttercup (*Ranuculus* sp.). This wetland extends from Brame Road to Highland Colony Parkway. This combination of wetland types occupies an estimated 1.31 hectares (3.24 ac.).

Wetland 10 is a small isolated palustrine emergent saturated wetland just north of wetland 9 and includes species such as rush, sedges, seedbox, and panic grass. This wetland is 0.04 hectare (0.11 ac.).

Soils within the wetland areas were characterized as low chroma matrix and mottling in the subsurface layers. Oxidized root systems were observed. Six soil types were identified within the project area (Madison County Soil Survey). These can be found in the Wetland Delineation Report (April 7, 1999). With the exception of Oaklimeter silt loam, none of the soils are mapped as hydric soils on the Mississippi State List of Hydric Soils. Riedtown silt loam may contain inclusions of hydric soils.

Evidence of hydrology was observed in the wetlands and includes direct observation of inundation, morphological plant adaptations, water stained leaves, surface scouring, drift lines, and oxidized root channels.

Wetlands within the project area provide the functions of flood storage, groundwater recharge, and groundwater discharge. The diversity of wetland and upland habitats provides habitat to a variety of wildlife species. Those wetlands delineated downstream of development and close to agricultural areas retain and remove pollutants and nutrients, thereby improving surface and groundwater quality.

PROJECT IMPACT ON WETLANDS

Construction of 3P13 will permanently fill approximately 0.69 ha (1.71 ac) of wetlands within the project area. Wetlands 2, 4, 6, 8, and 9 would be adversely impacted. No adverse impacts will occur to Wetlands 1, 3, and 10. Removal of Old Agency Road could provide minor benefits to Wetlands 5 and 7. The table below summarizes wetland impacts. Refer to Figure 1: Wetland Impacts, for size and location of impacts to wetlands.

Table E-1: Wetland Impact Data Summary

Wetland Number	Location of Impact	Approximate Wetland Area Ha (Ac)	Approximate Area of Impact Ha (Ac)	Impact as Percent of Total Wetland Area
1	-	0.67 (1.65)	-	-
2	Parkway	0.15 (0.37)	0.001 (0.002)	<1%
3	-	0.07 (0.18)	-	-
4	Parkway OAR Relocated	0.30 (0.73)	0.06 (0.15) 0.02 (0.05)	20% 6%
5	-	0.29 (0.73)	-	-
6	Parkway OAR Relocated	0.85 (2.10)	0.34 (0.84) 0.04 (0.10)	40% 5%
7	-	0.14 (0.35)	-	-
8	Parkway OAR Relocated Crossover Rd	0.42 (1.03)	0.04 (0.10) 0.02 (0.05) 0.003 (0.007)	10% 5% <1%
9	OAR Relocated OAR Relocated	1.31 (3.24)	0.02 (0.05) 0.15 (0.37)	2% 11%
10	-	0.04 (0.11)	-	-
TOTAL		**4.25 (10.5)**	**0.69 (1.71)**	**16%**

The proposed action includes construction of Natchez Trace Parkway which will follow the historic "Old Trace", the relocation of Old Agency Road, and construction of a bridge and connector road from Old Agency Road to Old Agency Relocated. Wetland impacts are associated with each proposed improvement.

The parkway alignment will impact a small corner of wetland 2 on the northern edge of the wetland. The open water portion of wetland 2 will not be impacted. Less than 1% of the palustrine scrub/shrub portion of wetland 2 will be impacted, resulting in negligible impacts to the overall function and value of the wetland.

The parkway alignment and the relocation of Old Agency Road will cross wetlands 4 and 6, impacting approximately 26% of wetland 4 and 45% of wetland 6. Wetland 6 will receive the greatest amount of impact. The parkway alignment will impact approximately 0.08 ha (0.20 ac) of the palustrine scrub/shrub portion of wetland 6, and 0.27 ha (0.67 ac) of the palustrine forested portion of wetland 6. Old Agency Road Relocated will impact approximately 0.006 ha (0.01 ac) of palustrine scrub/shrub wetland and 0.03 ha (0.07 ac) of palustrine forested wetlands associated with wetland 6 in the southern portion of the study area. Wetlands 4 and 6 are interconnected in the southern section of the study area near the Dinsmor subdivision. The development of the parkway and Old Agency Road Relocated will sever wetlands 4 and 6 into four or five separate areas and reduce the combined wetland area by 40%, resulting in a long-term major adverse impact. Although the local hydrology could be maintained through the use of culverts, the loss and fragmentation of wetland plant communities would impair their integrity and reduce the overall function and value of these wetlands. Loss and fragmentation of these wetlands will reduce their overall ability to provide flood storage and to allow for groundwater discharge and recharge, and will reduce their overall function of providing cover and habitat for wildlife.

The parkway alignment will impact a palustrine forested section on the northwestern edge of wetland 8. The construction of a crossover road will impact wetland 8 at the same location as the parkway motor road. An additional 0.003 ha (0.007 ac) of wetland will be impacted as a result of constructing the crossover road. Old Agency Road Relocated will also impact a small palustrine forested section of wetland 8 in the southern portion of the study area. Combined impacts to this wetland will be 0.06 ha (0.15 ac). Long-term impacts to this wetland will be moderate, with a loss of approximately 15% of this wetland. Fragmentation of wetland 8 will reduce its overall function of providing cover and habitat for wildlife. Hydrology can be maintained through the use of a culvert.

A small palustrine emergent section and a larger palustrine emergent section of wetland 9 will be impacted in the southern section of the study area as a result of Old Agency Road Relocated. Approximately 0.17 ha (0.42 ac), or 13% of this wetland will be impacted. Long-term impacts will be moderate. Old Agency Road Relocated will reduce the overall ability of this wetland to provide flood storage and provide habitat for small mammals and bird species.

In wetland areas 5 and 7 the removal of road surfaces, road fill, shoulders, and culverts could enhance the integrity and connectivity of these wetland areas. Where roads are proposed to be removed, disturbed areas outside the stream channels will be restored to the original contours and revegetated with native species. Stream channels could be returned to their natural state, and the local hydrology could be maintained or restored if necessary. Such restoration activities could result in minor to moderate beneficial impacts to the wetland systems.

Of the 0.69 ha (1.71 ac) of wetland impacts, approximately 0.44 ha (1.09 ac) of palustrine forested wetlands would be impacted, 0.09 ha (0.22 ac) of palustrine scrub/shrub wetlands would be impacted, and 0.17 ha (0.42 ac) of palustrine emergent wetlands would be impacted.

WETLAND AVOIDANCE AND MINIMIZATION

This segment of the parkway motor road was designed in conformance with NPS standards and the historic design criteria of the Natchez Trace Parkway, which have been developed since the late 1930s. Wherever possible, the route was aligned to avoid sensitive areas such as cultural sites and wetlands. Because the parkway right-of-way is a long and narrow strip of land, the opportunities to avoid all such sensitive areas are sometimes limited. Although the wetlands within the parkway alignment provide a measure of biological value and function, they are not considered to provide unique or exceptional habitat for wildlife, and impacts on wildlife caused by the loss of wetlands would therefore be minor.

For the most part, wetlands within the study area run perpendicularly to the parkway, which is bordered by developed residential areas, making it nearly impossible to avoid all wetlands. There is no other practicable alternative alignment that would avoid all wetlands within the study area. Impacts to wetlands vary from 0.6 ha (1.5 ac) in alternative 1, 0.5 ha (1.4 ac) in alternative 5, and 0.7 ha (1.7 ac) in alternatives 2, 3, and 4. Selecting the revised proposed action would impact the same amount of wetland area as alternatives 2, 3, and 4, and slightly more wetland area when compared to alternatives 1 and 5. Alternatives 1 and 5 do not extend Old Agency Road Relocated to Highland Colony Parkway, thus avoiding impacts to wetland 9; however, these alternatives would increase impacts to wetland 8 by shifting Old Agency Road Relocated to the north.

All possible wetland avoidance and minimization measures will be incorporated into the design of this parkway construction project, within the constraints of highway safety, good design, and preservation of aesthetic/scenic qualities indicative of the Natchez Trace Parkway. In addition, best management practices will be used to minimize impact to wetlands. Such practices for this project will include, at a minimum, installation of temporary control devices throughout construction such as: silt fences, slope drains, straw bales, inlet protection, sediment traps, and protective fencing; and stabilization and restoration of soils exposed as a result of grubbing, clearing, filling, and excavation activities following completion of construction activities. Measures will be implemented to prevent the control of spills of fuels, lubricants, or other contaminants from entering the waterway or wetland. Heavy equipment use in wetlands will be avoided. Whenever possible, excavated material will placed on an upland site. Revegetation of disturbed areas will be established in accordance with NPS policies and guidance.

The resulting loss of 0.69 ha (1.71 ac) of wetland has been deemed unavoidable. Although the wetlands will be lost, the Revised Proposed Action will minimize construction impacts on the parkway corridor and fulfill the legislative goal of extending the parkway to its historic southern terminus at Natchez, Mississippi.

WETLAND MITIGATION

Approximately 0.69 ha (1.71 ac) of wetlands will be impacted as a result of this project (approximately 0.44 ha (1.09 ac) of palustrine forested wetlands, and 0.26 ha (0.64 ac) of non-forested wetlands).

To compensate for the lost wetland acreage, approximately 0.88 ha (2.17 ac) of forested wetlands will be provided and 0.26 ha (0.64 ac) of non-forested wetlands will be provided in accordance with *Director's Order 77-1*, for a total wetland replacement of 1.14 ha (2.82 ac).

The narrow, linear nature of this segment in the parkway does not provide adequate space or conditions for the replacement of wetlands within the parkway itself. There is insufficient opportunity for mitigating impacts attributed to this project on lands managed by the National Park Service in either the same watershed or in another watershed within Natchez Trace Parkway boundaries. Similarly, there is insufficient opportunity for mitigating wetland impacts from the proposed project on other NPS lands in Mississippi. However, opportunities to mitigate the wetland impacts of this project do exist at Jean Lafitte National Historical Park and Preserve in Louisiana.

Jean Lafitte National Historical Park and Preserve includes the Barataria Preserve unit, an 18,500-acre wetland complex composed of bottomland hardwood, cypress swamp, and freshwater/intermediate marshes. The Barataria Preserve is one of the largest public land holdings within the Barataria-Terrebonne estuary, one of the most productive estuarine environments in North America. Within the Barataria Preserve numerous wetland restoration projects have been identified to restore hydrologic connections, protect interior marsh environments, remove potential contaminants, and protect and restore the wetland functions and values lost by previous subsistence and industrial activities. Numerous projects have been conceptualized and are being further refined and implemented as funding opportunities become available. The potential site(s) may include areas requiring the removal of fill from wetlands, or they may be wetland sites impacted by roads where breaching the road or installing culverts beneath it will restore hydrologic conditions to impacted wetlands.

The compensation ratios for the proposed project will be one-for-one (1:1) acreage wetland replacements for non-forested wetland impacts, and two-for-one (2:1) acreage wetland replacements for forested wetland impacts.

As funding for this project is finalized and construction drawings are prepared, a wetland restoration plan will be developed by the National Park Service at the Jean Lafitte National Historic Park and Preserve. The wetland restoration plan will include:

1. The specific wetland area to be restored.
2. A map of the compensation site.
3. A description of wetland functions to be restored and the degree to which they replace those functions lost at the project site.
4. A description of the restoration process.

5. The anticipated schedule for completion of the wetland restoration.

6. The anticipated time frame for the restored wetland to become fully functional.

7. A description of any monitoring and/or maintenance requirements.

8. The identification of the Natchez Trace Parkway, Section 3P13, construction funds as the funding source for this wetland mitigation.

9. A formal agreement between the Natchez Trace Parkway and the park providing the wetland mitigation site.

The restoration of wetlands at Jean Lafitte National Historical Park and Preserve in Louisiana will mitigate the parkway wetlands lost through the proposed construction project.

This project is consistent with the NPS no-net-loss of wetlands policy. The National Park Service, therefore, finds that this project is in compliance with Executive Order 11990, "Protection of Wetlands."

CONFORMITY WITH FEDERAL, STATE, AND LOCAL STANDARDS

The U.S. Army Corps of Engineers will review the parkway design drawings and wetland delineation report prior to construction. Authorization to fill the wetlands is being requested by the Federal Highway Administration. Mitigation requirements are anticipated.

An individual permit will be required from the U.S. Army Corps of Engineers to fill 0.69 ha (1.71 ac) of wetlands in the project area.

CONCLUSION

All possible avoidance and minimization measures were incorporated into the parkway project 3P13, thus the resulting loss of 0.69 ha (1.71 ac) of wetlands (approximately 0.44 ha (1.09 ac) of palustrine forested wetlands, and 0.26 ha (0.64 ac) of non-forested wetlands) has been deemed unavoidable. To compensate for the lost wetland acreage, approximately 0.88 ha (2.17 ac) of forested wetlands will be provided, and 0.26 ha (0.64 ac) of non-forested wetlands will be provided in accordance with *Director's Order 77-1*, for a total wetland replacement of 1.14 ha (2.82 ac). A wetland restoration plan will be developed by the National Park Service at the Jean Lafitte National Historic Park and Preserve in Louisiana.

The revised proposed action is consistent with the local *Comprehensive Plan* and transportation plans and would complement local cultural and historic goals by providing access to the Choctaw Agency site. Completing this parkway motor road section would improve the continuity of the recreational driving experience, a long-term, major beneficial impact.

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Windrush subdivision, 45, 46, 57, 60, 62, 63, 74, 76, 77, 92, 93, 100, 106, 107, 108, 110, 111, 121, 123, 124, 133, 134, 146, 147, 158, 159, 165, 171, 175, 176, 190, 191

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END

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2 / 3 /05

Figure 1: Wetland Impacts

Sheet 1 of 2

Wetland 6
0.34 ha (0.84 ac)
Wetland 1
Wetland 4
0.02 ha (0.05 ac)
Wetland 6
0.04 ha (0.1 ac)
Match Line
Legend
TO BE CONSTRUCTED
TO BE REMOVED
TO BE LEFT AS IS
NEW BRIDGE
ROADWAY CUT AREA
IMPACT AREA

1

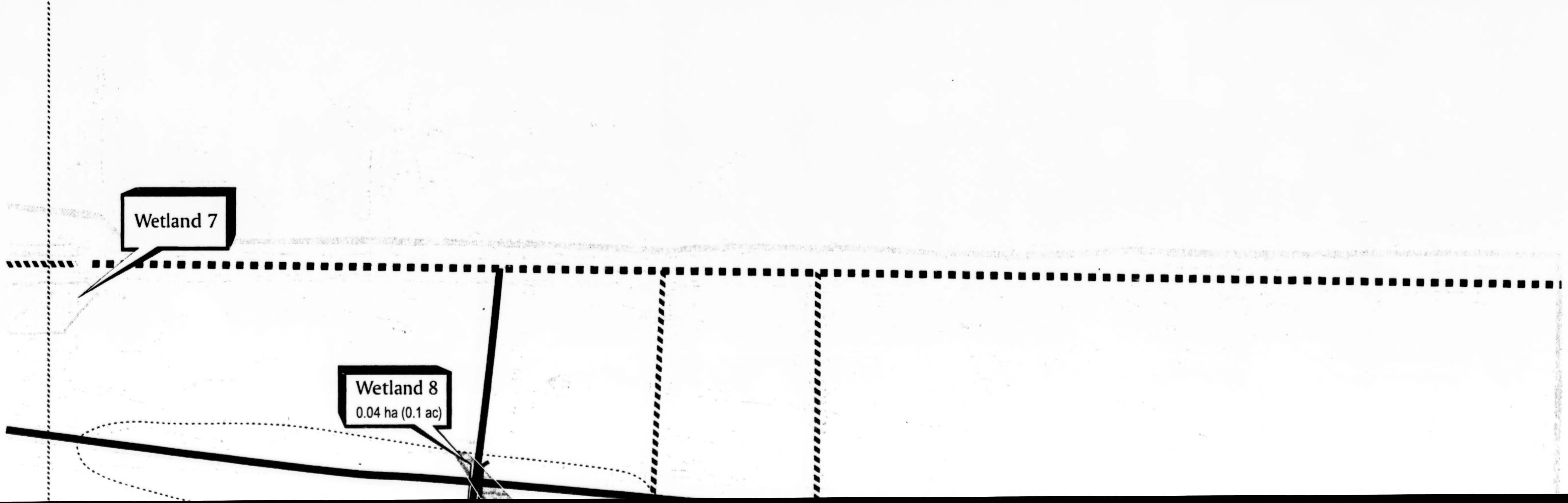
Legend

TO BE CONSTRUCTED	▬	TO BE REMOVED	▀▀▀
TO BE LEFT AS IS	■ ■ ■	NEW BRIDGE	▬
ROADWAY CUT AREA	⬭	IMPACT AREA	▨

1

Figure 1: Wetland Impacts

Sheet 2 of 2



Wetland 8
0.04 ha (0.1 ac)
Wetland 8
0.003 ha (0.007 ac)
Wetland 8
0.02 ha (0.05 ac)
Wetland 9
0.02 ha (0.05 ac)
Wetland 9
0.15 ha (0.37 ac)
Wetland 10
Match Line
Legend
TO BE CONSTRUCTED
TO BE LEFT AS IS
TO BE REMOVED
NEW BRIDGE
ROADWAY CUT AREA
IMPACT AREA